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SURGICAL MANAGEMENT OF ACUTE ARTERIAL OCCLUSION

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There is no greater emergency in surgery than that caused by the closure of a major artery with immediate loss of circulation of the parts supplied by that artery. Unless that circulation is restored either by opening the occluded vessel or by adequate collateral circulation, death of the part is inevitable and in immediate prospect. Medical management has to do with stimulating and attempting to develop collateral circulation. We are interested in that too from a surgical standpoint, but our primary interest is to reestablish the function of that particular vessel. Surgical methods to relieve arterial occlusion, as well as means of stimulating collateral circulation, will be discussed in relation to the causes of acute arterial closure. When the major vessel is occluded, it and its collateral circulation go into a spasm. This is nature's protective mechanism, one of shock to reduce hemorrhage and to prevent clotting in the vessels which will be required for the collateral circulation. Efforts to relieve this spasm too early, particularly if surgical intervention of the occluded artery is to be undertaken, may undo nature's protective mechanism and cause irreparable clotting.[1]

One of the most common causes of arterial occlusion is trauma in the form of lacerations or contusions. The laceration involving a vessel may be complete or incomplete, and the distinction between these two in the subsequent course is important. Where there is a complete laceration there are hemorrhage and spasm of the vessel involved. Where such a wound is seen early, a surgical repair of the severed artery is indicated and not technically difficult. The size of the lumen of an artery may be reduced by one half and still have 75 per cent of the normal blood flow through that vessel. Fine arterial silk sutures can be placed not involving the intima, and frequently a single running silk suture is all that is necessary (fig. 1). The hydrodynamic law that the wall pressure at any point is inversely proportional to the rate of flow aids us in this work. The rate of flow in a large artery is so rapid that the wall pressure is reduced. A portion of contiguous muscle can be sewed over the repair (fig. 2). Even veins may be similarly repaired and in the last six months I sutured two lacerations of the vena cava, accidentally produced during the removal of a kidney, satisfactorily with a single running suture. If the complete laceration is seen late, a resection of the artery and the accompanying vein is indicated. A large vessel should not be ligated in continuity. When the iliac artery must be divided a resection of the accompanying vein decreases the incidence of gangrene by approximately 12 per cent. This probably occurs by reducing the rate of venous return and permitting better peripheral nourishment by the restricted blood supply, entering the extremities through collateral circulation. When surgical repair has been attempted, heparin early and then dicumarol should be used, the bleeding time being maintained above fifteen minutes. Regardless of the type of operation, sympathetic nerve blocks should be repeated frequently. It is after the operation that the collateral circulation should be stimulated and spasm reduced or prevented. At times sympathectomy is indicated. The medical measures of stimulating collateral circulation by the abstinence of tobacco, the use of such vasodilatory drugs as whisky and papaverine, postural changes and externally controlled temperatures, and later exercises in a recumbent position are of great aid at this stage. Amputation is an indication of failure of previous surgical attempts and should be done only when all other efforts have failed. Ample time for demarcation and collateral circulation to develop should be given except in the presence of a spreading infection. When amputation is necessary, it should be of the modified guillotine type. By that is meant a simple amputation with the muscles cut slightly higher than the skin and the bone slightly higher than the muscles and the closure with loose approximation of the skin only, and retraction prevented by external traction. The making of flaps will result in pus pockets, gangrene and sometimes death, as has been proved so often in war surgery these last four years. Steel wire sutures reduce reaction.

The incomplete laceration of major vessels results in a hematoma, which may be of a pulsating type and with time develop into a so-called false aneurysm. Five such aneurysms were seen in transporting 450 wounded on one evacuation after the invasion of Pellelieu by a U. S. Navy hospital ship and it was necessary for me to operate on all 5 while at sea, 3 rupturing externally and 2 internally. If seen early, some of these lacerations may be repaired using again the fine arterial silk sutures. If this is not feasible, a resection of the artery and vein with subsequent nerve blocks should be done. After the aneurysm definitely has developed, one must determine whether it is arterial or arteriovenous.[2] Unless there have been serious hemorrhages or the tumor is rapidly enlarging, it is best to delay operation from three to six months to develop adequate collateral circulation. In the arterial type of aneurysm the obliterative opera-

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1. Pratt, G. H.: Importance of a Knowledge of Vascular Surgery in World War II, editorial, Am. J. Surg. **56**: 335-336, 1942.

2. Pratt, G. H.: Surgical Treatment of Peripheral Aneurysm, Surg., Gynec. & Obst. **75**: 103-109, 1942.

tion is the one of choice; all collateral openings in the sac are sutured, and the sac itself is obliterated by the implant of a contiguous muscle. The retention of the sac is of primary importance,[2a] as the collateral vessels run in or near it; sac excision will interrupt these collateral vessels and cause a failure of the blood supply instantly. If the aneurysm is of the arteriovenous type, all vessels entering the sac itself should be resected and the sac removed (fig. 3). The collateral circulation in the arteriovenous type is so adequate that removal

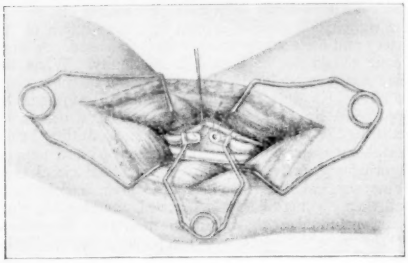

Fig. 1.—Arterial repair with fine surgical silk, not entering intima.

of the sac is not dangerous and its retention may result in a recurrence. Collateral vessels are so immature in the arteriovenous type that they tear frequently and hemorrhage is not unusual. An adequate supply of blood should be available at the time of operation. While in the Navy I operated on 18 aneurysms of traumatic origin, following these principles. Circulation was reestablished in all without the loss of any part of an extremity. In operations on 51 consecutive aneurysms there has been tissue loss in only 1 instance, and in that there was loss of one little toe.

Contusions may cause local thrombosis, which if unrelieved may propagate and result in gangrene. If there are signs of arterial failure distally, the area should be explored and pressure removed. At times it may be necessary to open the artery and remove the thrombus. Frequently the resection of the vessel is necessary to prevent the thrombus from propagating.

Arterial embolism [3] causes the sudden occlusion of a major vessel, usually at a point of bifurcation. Thus we see them at the bifurcation of the aorta 12 per cent, at the division of the external and internal iliacs 18 per cent, at the femoral and the femoral profunda 50 per cent and at the anterior and posterior tibial arteries 12 per cent. Ninety-five per cent of these arterial embolisms develop from left sided heart disease of the rheumatic type with the addition of auricular fibrillation. There has usually been some exciting factor such as a surgical operation or the labor of pregnancy, which precipitates the embolism. The sudden pain, inability to use the part, coldness and a whiteness of the limb in the presence of auricular fibrillation are diagnostic. Surgical management by embolectomy is indicated if the patient is seen within twelve to twenty-four hours, and success depends on this time factor just as it does in ruptured peptic ulcer. Occasionally success may follow delay; I have removed an embolus successfully sixty hours after it occurred at the bifurcation of the aorta. Since most of these emboli occur in the lower extremities, the artery can be exposed just below the inguinal ligament where it is subcutaneously situated. A longitudinal incision in the artery is made and the site of the embolism determined by a probe. Ingenuity is sometimes necessary to remove the clot. Suction on a catheter, the formation of a corkscrew out of a silver or steel wire, forceps, and the manual milking with the hand have all been used successfully (fig. 4). After the clots are removed, the artery is washed with heparin solution and the wound closed by a single running silk suture, not entering the intima. Any generally trained surgeon is capable of performing this operation. Sympathetic nerve blocks after the operation and the use of heparin and dicumarol again are necessary. The medical measures to stimulate collateral circulation should be continued. Since the first successful embolectomy by Labey in 1911 there have been 382 recorded. I have performed the operation in 27 instances with a return of circulation at 61.5 per cent. Only 1 out of every 4 patients is alive today, death being due to the underlying heart condition, but this figure is favorably comparable to that of carcinoma of the breast after five years.

Arterial thrombosis may acutely occlude a previously diseased vessel. In these patients a large plaque may loosen from the wall and close the lumen like a trap door, or an artery gradually closing may suddenly close with a clot. It is rarely possible to remove such a thrombus because of the disease in the vessel. Sympathetic nerve blocks are at times helpful, but eventually amputation becomes necessary.

At times infection may cause acute occlusion, the streptococcus and the gas group of Clostridium perfringens being particular offenders. Their management includes the use of the sulfonamide drugs, penicillin and specific serums and, if uncontrolled, a relatively early amputation at the vital level, the level being determined by the color of the tissue, the fact that the muscle bleeds well and contracts when stimulated. While there can be no delay in amputation in the presence of the clinical picture of gas gangrene infection, it is well to add a word of caution at this time

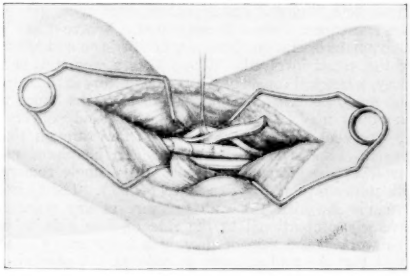

Fig. 2.—Repair of artery completed, reinforced with contiguous fascia.

regarding the presence of air or crepitation in a wound. Crepitation does not necessarily mean a gas bacillus infection. The entry of a high velocity missile may drive air into the tissues, causing a crepitus, and the same may occur after puncture wounds from airplane or automobile accidents. The diagnosis of a gas bacillus infection should be made on the clinical picture with fever, a high pulse rate, sanguineous drainage from the wound, massive edema and the anxious sick look of the patient being suggestive. I received 6 patients aboard the U. S. Naval Hospital Ship *Relief*

2a. Matas, R.: Personal Experiences in Vascular Surgery, Ann. Surg. **112:** 802, 1940; personal communications to the author.
3. Pratt, G. H.: Surgical Treatment of Peripheral Embolism, Am. J. Surg. **56:** 566-572, 1942.

for amputation on the basis of crepitation in the wound or Clostridium perfringens cultures. The clinical picture of gas gangrene was not present and in none of these 6 was amputation performed. These organisms are contaminants in many wounds and at times are controlled by penicillin. The mere presence of Clostridium perfringens organisms does not necessarily mean a gas bacillus infection unless the clinical picture also is present. Massive doses of penicillin may change our conception of gas infections.

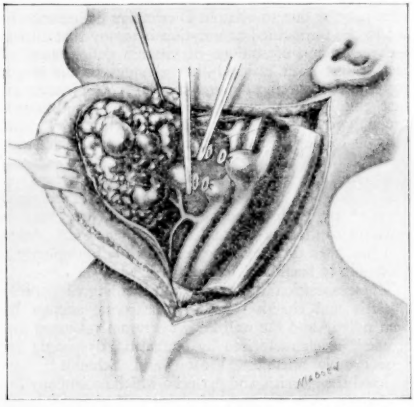

Fig. 3.—Arteriovenous aneurysm, showing the extreme degree of collateral development in the arteriovenous type. It was necessary to resect most of the carotid artery and jugular vein.

One of the most common causes for the occlusion of the artery of the upper extremity is a scaleneus anticus syndrome with or without cervical rib. This may cause a thrombosis of the subclavian artery with the symptoms of numbness, weakness, change of color, absence of the peripheral pulse and at times ulcers or even gangrene. When there is pressure on the brachial plexus, symptoms may be more neurologic. At such times the symptoms are of anesthesia and paresthesia with tingling and pain, particularly on the ulnar nerve side of the hand. Treatment for this condition is scalenotomy with removal of any bony obstruction (if present), the rib being rongeured away. A band to a rib from a long transverse vertebral process or an anomalous formation of the first or second ribs can produce a similar syndrome. After operation circulation should be stimulated through collateral circulation in the methods already mentioned, including stellate ganglion blocks or thoracic sympathectomy. The work of White and Smithwick has shown that the stellate ganglion should not be removed. Excising the stellate ganglion is a postganglionic operation and sensitizes the part to sympathin or epinephrine and produces greater spasm than before. A preganglionic operation can be done by dividing the sympathetic chain below the third dorsal ganglion, resecting the communicating fibers to the second and third intercostal nerves and a section of the nerves themselves and leaving the sympathetic chain and ganglions in situ. All connections between the chain and the costal nerves are interrupted. The retention of the chain and the stellate ganglion preserves the chain cells and prevents the postganglion sensitization type of reaction from occurring. White cleverly covers the sympathetic chain with a tantalum foil, and sews it into the intercostal muscle, further to insure no future connection with the nerves to the arm.

The recent war, partly fought in the arctic region, together with the submarine warfare and exposure of men to cold and wet in open boats, brought to prominence the lesions known as frostbite, immersion foot [4] and the so-called trench foot of World War I. The cooperation of the British and American medical services permitted these patients to be segregated and studied, and from this study a new conception of these lesions and their treatment evolved.

When a foot is frostbitten, actual freezing of the tissues occurs. In the immersion or trench foot syndrome the foot does not actually freeze, but it becomes chilled, anesthetic and edematous. In trench foot, trauma from walking or standing on these injured feet is added. At sea the feet are not traumatized, but, with the dependency in the water or in a boat, edema is severe and as the result of starvation and hypoproteinemia this edema is aggravated. Immersion foot may occur in prolonged submersion in warm water as well, the syndrome being a chemical edema one. The trench foot group are more prone to have infection and to lose the limbs. This was shown by the reports of White,[5] Patterson [6] and Anderson [7]—only 1 of 100 immersion feet was amputated, while 24 of 231 from Attu lost a foot or toes.

When the part is warmed and the circulation is restored to these limbs, it rapidly warms the deep tissues, and the contiguous transmission of this heat to the damaged skin surface causes discoloration and bleb formation. The circulation in the skin has been more impaired by the cold, particularly the venous and lymphatic vessels, and it is unable to remove the increased arterial supply rapidly, and blebs and edema result. If continued, the skin breaks and death of the superficial tissues occurs with gangrene. This excessive

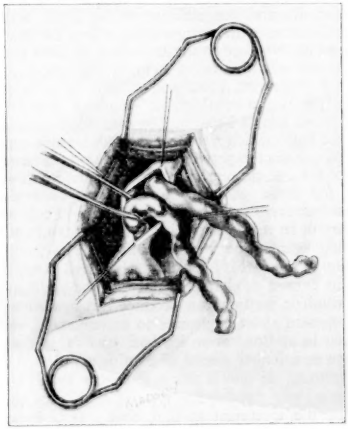

Fig. 4.—Removal of embolus and accompanying thrombosis from femoral and iliac arteries.

4. Webster, D. R.; Woolhouse, F. M., and Johnston, J. L.: Immersion Foot, J. Bone & Joint Surg. **24**: 785-794, 1942.
5. White, J. C.: Personal communication to the author.
6. Patterson, R. H.: Personal communication to the author.
7. Patterson, R. H., and Anderson, F. M.: Effects of Prolonged Wet and Cold on Extremities, Bull. U. S. Army M. Dept., 1940, no. 75, pp. 6-70.

vasodilatation of the part is probably due to the absorption of diseased tissue as the limb becomes warmer.

It was found early that patients themselves realized the danger of too rapid warming and return of circulation. Patients were seen to open windows and put their feet out and frequently complained that they were much more comfortable back in their life boats. This fact, and some judicious thinking by such men as Webster, Woolhouse and Johnson of the Royal Canadian Navy and White and Scoville [8] and others, led to the cooling or refrigeration treatment during this hyperemic stage. Therapy thus consists in cooling, best applied by temperature controlled cradles or ice bags and electric fans. In one to six weeks this stage has subsided and the superficial tissues can again carry the circulation load.

Many have residual pain and stiffness of joints and unhealthy thin skin. Biopsies have shown that there is a subcutaneous fibrosis which causes the inability of the tendons to flex well. Collagen deposits around the nerve cause the pain. Physical therapy, high vitamin diets and encouragement help at this stage. In those in whom burning pain persists when the peripheral circulation is impaired, or in the group in which spasm is a factor, lumbar sympathectomies are indicated. In these the response has been excellent. Nerve blocks should be done prior to this procedure to select the ones who will best respond. The residual causalgias are a sympathetic surgical problem. Our conception of therapy for these patients has changed often in the past years and no doubt will again. Only by pooling our knowledge and thoughts, however, can we progress. Perhaps the still unreported human experiments of the Germans, inhuman as they were, may help us when they are presented. Recently some work has been reported with the use of such anticoagulants as heparin to reduce the viscosity and coagulability of the blood, and this, in combination with refrigeration, offers the best possibilities at this time in the treatment of these patients. Dicumarol will also be of help in this respect. The hospital treatment, then, will consist in refrigeration of the part for a considerable length of time and the intravenous use of heparin. In controlled experiments only the limbs which were treated with heparin survived the refrigeration experimentally produced. Plasma will replace the lost protein. Prophylactically, much can be done for these patients. Certainly no one with a diseased artery should be exposed either in cold or wet weather or in refrigeration boxes or cars, and adequate covering against the weather and water without constriction of the part is important. It is well to remember that on even a moderately cold day the addition of a cold wind or wetting can produce this syndrome, and that repeated short exposures to extreme cold, such as running in and out of an ice box, may cause the same damage as a longer period of continuous cold of a low temperature. If one is wet and cold it would be well to remove any constricting type of gear, thus actually starting the treatment at that time. It is important that in the transportation to the hospital this chilling be continued. Again, anything which throws vessels into extreme spasms, such as tobacco, should be curtailed. Drugs such as alcohol, on the other hand, will be beneficial. Sympathectomy for residual pain or inadequate blood supply will remain the best delayed therapy for selected patients.

65 East Fifty-Fifth Street, New York 22.

8. White, J. C., and Scoville, W. B.: Trench Foot and Immersion Foot, New England J. Med. **232:** 415-422, 1945.

THE ORAL MANIFESTATIONS OF IRON DEFICIENCY

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The recent recognition that lesions of the buccal tissues may be due to vitamin B complex deficiencies has led to the unjustified assumption by many that all such lesions are manifestations of vitamin deficiencies. In fact it has been claimed that changes in the lingual papillae are specifically due to niacin deficiency [1] and that the glossitis encountered in other conditions is probably due to "chronic niacin deficiency." [2] Similarly it has been implied that fissures at the angles of the mouth are pathognomonic of riboflavin deficiency [3] although it has been demonstrated that such lesions may heal following the administration of niacin,[4] pyridoxine [5] or pantothenic acid [6] or that they may be resistant to therapy with all known B factors.[7] Attention has been directed repeatedly to the multiplicity of etiologies of such oral lesions.[8]

The association of atrophy of the lingual papillae, glossitis and cheilosis with hypochromic anemia has been noted,[9] and the well known Plummer-Vinson syndrome [10] is characterized by stomatitis, dysphagia and hypochromic anemia. Vinson and Schmidt [11] have depicted the glossitis and perlèche which accompany this syndrome. The etiology of these oral changes is not clear. Vinson [12] has attributed the various evidences of malnutrition, such as anemia and glossitis, in these cases to interference with nutrition caused by the dysphagia. Kernan [13] reported examining a case resembling Plummer-Vinson's syndrome which exhibited atrophic lesions of various mucous membranes (nose, mouth, vagina, rectum) which were ascribed to a vitamin deficiency and suggested that esophageal scars and webs may form "on a basis of dietary deficiency." In a similar vein Wintrobe [14] writes that in chronic hypochromic anemia "The cheilosis of riboflavin defi-

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This study is one of a series of reports from the Tennessee-Vanderbilt Nutrition Project, which is financed by the Nutrition Foundation, Inc., the International Health Division of the Rockefeller Foundation and the Tennessee Department of Public Health.

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4. Cayer, D.; Ruffin, J. M., and Perlzweig, W. A.: The Clinical Significance of Glossitis and Cheilosis in Deficiencies of the B Complex, South. M. J. **38:** 111 (Feb.) 1945.

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7. Ellenberg, M., and Pollack, H.: Pseudo Ariboflavinosis, J. A. M. A. **119:** 790 (July 4) 1942.

8. Comroe, B. I.: Diagnostic Importance of the Tongue in Internal Medicine, Am. J. M. Sc. **194:** 661 (Nov.) 1937. Jeghers, H.: Nutrition: The Appearance of the Tongue as an Index of Nutritional Deficiency, New England J. Med. **227:** 221 (Aug. 6) 1942. Dann, W. J., and Darby, W. J.: The Appraisal of Nutritional Status (Nutriture) in Humans, Physiol. Rev. **25:** 326 (April) 1945. Anonymous: Specificity of the Ariboflavinosis Syndrome in Man, Nutrition Rev. **1:** 327 (Sept.) 1943. Darby and Milam.[10]

9. Wintrobe, M. M.: Clinical Hematology, Philadelphia, Lea & Febiger, 1942, p. 428. Jeghers.[8]

10. Vinson, P. P.: Hysterical Dysphagia, Minnesota Med. **5:** 107 (Feb.) 1922. Kernan.[13] Vinson.[12] Suzman.[24]

11. Vinson, P. P., and Schmidt, H. W.: Hysterical Dysphagia: Report of a Typical Case, Virginia M. Monthly **64:** 142 (June) 1937.

12. Vinson, P. P.: The Diagnosis and Treatment of Diseases of the Esophagus, Springfield, Ill., Charles C Thomas, Publisher, 1940, p. 137.

13. Kernan, J. D.: Plummer-Vinson Syndrome, Arch. Otolaryng. **32:** 662 (Oct.) 1940.

14. Wintrobe: Clinical Hematology,[9] p 428.

ciency may be present." Meulengracht and Bichel [15] reported that riboflavin exerted beneficial effects on the external mouth lesions in cases of Plummer-Vinson syndrome but did not relieve the other manifestations including the dysphagia, a symptom which has been described as due to a deficiency of the vitamin B complex.[16]

Waldenström [17] in a too little known paper has presented clinical evidence interpreted to show that "fissures in the corners of the mouth, sores on the tongue, pains and spasm in the throat, changes in the nails and even vulvovaginitis may be healed after a sufficient administration of iron without any other therapy." Waldenström did not demonstrate that his cases were resistant to therapy with the B complex; hence his conclusions might be criticized on the grounds that the patients may have taken a better diet during the period of iron therapy and thereby overcome a concomitant B complex deficiency. The reported studies do not permit a decision as to whether such glossitis and cheilosis may be a manifestation of iron deficiency per se or whether their association with hypochromic anemia is due to an accompanying B complex deficiency. The absence of any general understanding of a possible role of iron deficiency in the production of these lesions of the oral mucosa is illustrated by the fact that Schour and Massler [18] in a recent review of the effects of dietary deficiencies on oral structures dismiss the subject with a single sentence: "The oral manifestations of iron deficiency have been given much less consideration than those of calcium deficiency and merit investigation."

It is my purpose in this report to present evidence that atrophic lingual papillae, glossitis and/or angular fissures which accompany iron deficiency anemias are often due to the lack of iron alone and not to accompanying B complex deficiencies. The frequent confusion of these cases with B complex deficiencies will be illustrated by the case reports. Finally, the effect of this finding on the interpretation of clinical evidences of the prevalence of B complex deficiencies within the general population as revealed by nutrition surveys will be discussed.

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MATERIAL AND METHODS

The cases here reported were taken from the Nutrition Clinic of the Department of Medicine of Vanderbilt University Hospital with the exception of 1 (case 4), which I followed during a nutrition survey in North Carolina.[19] It has been a common experience in this clinic to encounter patients, especially women, with the recurrent oral signs as enumerated and with accompanying easy fatigability, indigestion, "nervousness" and other symptoms frequently ascribed to "subclinical B complex deficiency" but who fail to respond to therapy with adequate doses of pure or crude B vitamins. Many of these patients have dietary histories which appear adequate; that this is true has been substantiated by laboratory estimations on body fluids.[20] Such patients have been scrutinized in an effort to ascertain the origin of these lesions. From this group there emerged the study herein reported.

The iron absorption tests reported in some of these cases were carried out by the technic developed by Hahn and his co-workers,[21] utilizing radioactive iron. The absorption by an adult of more than 5 per cent of a test dose of radioactive iron is to be interpreted as definite evidence of the existence of an iron deficiency. Dr. Paul F. Hahn of the Department of Biochemistry of Vanderbilt University School of Medicine carried out these studies in 3 of the cases here reported.

The syrup referred to as B complex syrup contained 25 mg. of niacin, 1 mg. of riboflavin and 3 mg. of thiamine to 4 cc.

REPORT OF CASES

CASE 1.—Mrs. E. I. L., aged 38, white, quadrigravida, was first admitted on April 1, 1940 with the complaint of a hurting and burning of the stomach and chest after meals for the past five years. Her mouth had been constantly sore. There had been no diarrhea, but there had been constipation during the past three years. Increased tiredness had been noted. Examination revealed that the patient was apprehensive and underweight (weight 110 pounds [50 Kg.], height 63 inches [160 cm.]). The skin of the hands was hard and dry. There was oral sepsis, and the tongue exhibited imprints of the lower teeth without papillary atrophy. Moderate thyroid enlargement was noted, but there were no signs of toxicity and the basal metabolic rate was within normal limits. A diagnosis of "subclinical pellagra" and nodular, nontoxic goiter was made. She was treated by dietary instruction, plus brewers' yeast, cod liver oil and niacin 50 mg. three times a day. The teeth were extracted. Some improvement was exhibited, but she stopped coming to the clinic in October 1940.

The second admission of this patient was on Nov. 11, 1944, at which time she complained of pruritus vulvae of two years' duration. There were no other symptoms suggesting diabetes mellitus. The only other genitourinary complaint was frequent menses, occurring every two to four weeks. There were occasional hot flashes. Her tongue burned and her whole mouth was sore at intervals. She had worn dental plates for four years. One month previously she had had diarrhea for a fifteen day period.

On physical examination she appeared to be moderately well nourished (weight 123 pounds [56 Kg.]). There was dry pigmented skin of the ankles and shins, interpreted to be dermatitis ab igne. The lips were normal in appearance, the tongue was pink with definite atrophy of the marginal papillae. She wore dental plates. The right lobe of the thyroid was enlarged. An apical systolic murmur was heard on occasions. No alterations of reflexes were elicited.

Laboratory examination revealed a hemoglobin concentration of 10.5 Gm. per hundred cubic centimeters, an erythrocyte count of 3.90 million per cubic millimeter, a total white blood cell count of 7,300 per cubic millimeter, a packed cell volume of 36.5 per cent and a basal metabolic rate of —9 per cent.

She was treated with phenobarbital 0.03 Gm. three times a day and B complex syrup 4 cc. three times a day. On November 18 the patient was less nervous, but the sore mouth persisted. The epithelial tufts were absent from the filiform papillae, the tongue was slick along the margins and the tip, there were red denuded areas on the left margin and at the tip, and some central fissuring was present (fig. 1). The pruritus vulvae persisted. Treatment with B complex syrup was continued as before, and sodium perborate mouth wash was added. There was no improvement by December 6. The gynecologic consultant on that date reported no obvious cause for the pruritus. A negative thrush culture was obtained. The same therapeutic measures were continued until Jan. 10, 1945 with no improvement. The patient complained bitterly at this time of severe pruritus,

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"rawness and burning of the tongue and lips" and of cracks in the corners of the mouth. The tongue continued to show the same abnormalities as before. The hemoglobin level was again reported as 10.5 Gm. Other laboratory findings of interest were a serum vitamin C of 0.3 mg. per hundred cubic centimeters, serum carotene of 347 micrograms per hundred cubic centimeters and serum vitamin A of 161 international units per hundred cubic centimeters.

A radioactive iron absorption test on Dec. 6, 1944 had revealed an uptake of 97 per cent of a test dose of 7 mg. On Jan. 10, 1945 there was prescribed 0.3 Gm. of ferrous sulfate three times a day in addition to the B complex syrup. One week later the patient volunteered the information "My mouth is well." The dusky spots had disappeared from the tongue, but the fissure and atrophic margin remained. By January 31 there had occurred further improvement on this regimen—the tongue and mouth were not sore, there was complete relief for the first time from the pruritus vulvae, and she was much less nervous. The tongue appeared to be normal on examination. The red blood cell count was 5.25 million, the hemoglobin was 12.5 Gm. and the packed cell volume was 44 per cent.

Fig. 1 (case 1).—Appearance on Nov. 18, 1944. Note the swelling of the tongue and the atrophy of the papillae. See text for complete description.

The administration of iron was continued, and on May 9 the hemoglobin had reached 13.0 Gm. and the packed cell volume 47 per cent. All therapy was discontinued on June 6, and the patient has continued well to date (five months).

This case presented the so-called classic symptomatology of "subclinical B complex deficiency"—a previous diagnosis of "subclinical pellagra," oral lesions, easy fatigability, constipation and a bout of diarrhea—yet she responded not at all to nine weeks of therapy with thiamine, niacin and riboflavin. She exhibited a mild hypochromic anemia, conditioned by excessive menstrual bleedings, and there was a very high iron uptake. It is certain that she was deficient in iron. One week of iron therapy was followed by subjective relief from the sore mouth, and within three weeks the appearance of the tongue was normal. This was accompanied by a satisfactory rise in the hemoglobin level and, interestingly enough, dramatic relief from a persistent pruritus vulvae.

Case 2.—Mrs. M. M., aged 31, white, a tertigravida, was first admitted on March 23, 1929 with the complaint of stomach trouble and shortness of breath. She had experienced a burning sensation in the epigastrium for many years. This had been treated by a Sippy regimen without success. While on the Sippy diet she had developed a dysphagia. A gastroenterostomy had been performed at another hospital, and the recovery was complicated by a generalized infection necessitating prolonged bed rest. Physical examination at this admission revealed that she was thin and nervous, was 65 inches (165 cm.) tall and weighed 99 pounds (45 Kg.). The mouth was edentulous, and the mucous membranes were pale. The tongue was coated except for some raw reddening over the anterior central portion. X-ray examination revealed the gastroenterostomy and spasticity of the colon. The red blood cell count varied from 3.5 to 4.3 million; the hemoglobin was from 60 to 83 per cent. No specific therapy was instituted, and the patient was discharged on the twenty-eighth day with the diagnosis of psychoneurosis.

The second admission was on April 18, 1937 with the complaint of a mass on the gums. The patient weighed 111 pounds (50 Kg.). The removal of a small fibroma from the gums was followed by considerable bleeding. The hemoglobin was recorded as 11.5 Gm. No other therapy was administered.

The third admission was on Feb. 9, 1943 for the complaint of bloating, smothering, shortness of breath, belching and dizziness. Since last seen in this clinic the patient had frequently experienced a sore mouth and tongue, and difficulty in swallowing. She had restricted herself to a diet composed largely of milk and free of meat because of the dysphagia. Her last menstrual period was in November 1942. On physical examination she was seen to be thin, pale and undernourished, and she weighed 106 pounds (48 Kg.). There was pitting edema of the ankles. She wore dental plates. There were scars at the corners of the mouth. The tongue appeared swollen and was denuded of papillae anteriorly. An apical systolic blow was heard. Laboratory findings of interest were an erythrocyte count of 3.32 million, hemoglobin of 4.7 Gm., packed cell volume of 24 per cent, a serum iron of 59 micrograms per hundred cubic centimeters and serum albumin of 4.8 Gm. per hundred cubic centimeters with a total serum protein of 6.6 Gm. per hundred cubic centimeters. The stool was negative for blood. The thiamine excretion in the urine, the serum carotene, vitamin A and ascorbic acid were all within a normal range. There was 20.5 degrees of free hydrochloric acid after histamine stimulation.

Treatment with ferrous sulfate, dilute hydrochloric acid and a regular diet was followed by a slow rise in hemoglobin and a small reticulocyte response (4 per cent). She was given a total of 1,500 cc. of blood by transfusion. The addition of brewers' yeast, cod liver oil and a high protein diet was made. On July 9 the red cell count was 4.46 million and the hemoglobin was 13.0 Gm.

On Aug. 3, 1943 the patient returned with the complaint of menorrhagia. Endometrial biopsy revealed an atrophic endometrium. Treatment with diethylstilbestrol was instituted, but she failed to return for complete follow-up.

On Sept. 24, 1944 the patient again returned because of menorrhagia. Ferrous sulfate, brewers' yeast and cod liver oil were prescribed, but the patient failed to take the iron because of a gastrointestinal disturbance which followed the first dose.

The patient was readmitted on April 14, 1945 with the complaint of nervousness and dysphagia. There had been no burning of the eyes, no paresthesias, sore mouth, skin lesions or diarrhea. The physical examination was essentially negative. The tongue had a "patchy coating with intact papillae." There were no neurologic changes. No edema was observed. Laboratory examination revealed an erythrocyte count of 4.08 million, hemoglobin 11.5 Gm. and white blood cell count 4,000. No therapy was instituted.

On June 20 she complained of a sore mouth and tongue. Examination of the tongue revealed a patchy denudation of the epithelium (fig. 2). The hemoglobin concentration was 11.0 Gm. Radioactive iron absorption was 47 per cent of a test dose of 4 mg. Gastric analysis showed 10 degrees of free hydrochloric acid in the fasting specimen and 16 degrees in

a specimen after alcohol. X-ray examination of the chest, gallbladder and gastrointestinal tract demonstrated no active lesions.

The oral administration of ferrous sulfate 0.3 Gm. three times a day was instituted. The patient reported that the sore mouth disappeared within a week. On July 18 the dysphagia

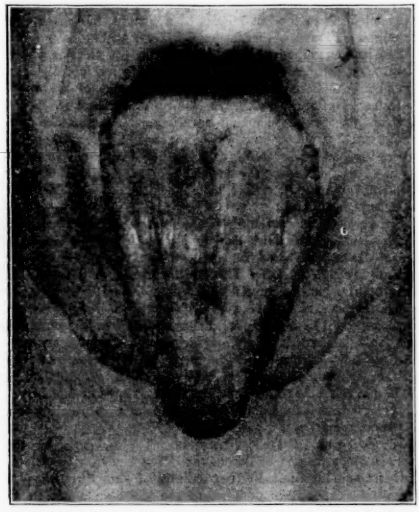

Fig. 2 (case 2).—Appearance on June 20, 1945, showing the papillary atrophy and denudation of the epithelium before iron therapy was instituted.

had also disappeared and the tongue was normal in appearance. The hemoglobin level had risen to 13.5 Gm. and the packed cell volume to 43 per cent. On October 9 the patient continued to be free from complaints. She weighed 106 pounds (48 Kg.). The hemoglobin was 14.2 Gm., the red cell count 5.11 million and the packed cell volume 48 per cent. Iron administration was discontinued on this date. The tongue has remained normal (fig. 3).

This history suggests a mild Plummer-Vinson syndrome. It is of considerable interest that the lesions of the tongue observed in this patient intermittently over a period of sixteen years were always accompanied by a hypochromic, iron deficiency anemia which can be attributed to abnormal blood losses. Again, the high iron absorption and the response to therapy proves the existence of the iron deficiency. The response of the tongue changes (compare figure 2 and figure 3) was purposely tested without preceding B vitamins in order to determine whether they responded to this single agent. It is not believed that the diet of the patient was altered during the last therapeutic trial, as no instructions were given her concerning diet and she did not gain in weight during the interval.

CASE 3.—Mrs. E. N., aged 36, white, a tertigravida, was admitted on Jan. 25, 1932 with the complaint of weakness. All teeth had been extracted twelve years previously. Three years before she had undergone an abdominal operation, following which her menstrual periods had been of twelve days' duration. She weighed 111 pounds (50 Kg.) and was 65 inches (165 cm.) tall. Complete physical examination revealed nothing remarkable. Laboratory studies showed a red blood cell count of 4.0 million, with a hemoglobin concentration of 9.8 Gm. The impression recorded was psychoneurosis, adentia and secondary anemia. She was treated with elixir of iron, quinine and strychnine, and psychotherapy, with some improvement.

The second admission was on Sept. 26, 1940, when the patient complained of choking with food for the past five years. During the last year the "least lump in food caused choking." She had noted intermittent cracking of the corners of her mouth for the past year. She had had a diarrhea the previous spring. There had been no dermatitis, no photophobia, no night blindness. For the last few months the patient had experienced menstrual irregularities. Her dietary had included a quart of milk daily and liver once or twice a week. On physical examination she weighed 108 pounds (49 Kg.). Her lips were dry and shiny, there were fissures at the corners of the mouth, and a "splotchy reddening of the tongue with definite atrophy over the tip" was noted. The skin was dry, the nails pale. Slight ankle edema was present. Examination with the slit lamp revealed a slight but definite invasion of the cornea. Treatment with 4 mg. daily of riboflavin subcutaneously was instituted. On September 30 there appeared to be some improvement of the lip lesions, but the tongue was not altered. The hemoglobin at this time was 11.4 Gm., the erythrocyte count 3.94 million. The patient was advised as to a good diet, and supplements of dried brewers' yeast 30 Gm. three times a day were prescribed.

On November 7 the patient weighed 114 pounds (52 Kg.). The mouth was still sore despite the continuous administration of yeast. The dysphagia persisted. Therapy was unchanged. On December 5 the mouth was still sore and burning, and the angles of the lips were fissured. Her last menstrual period had been of two weeks' duration.

Despite the continued taking of the prescribed yeast and a dietary consisting of a quart of milk, ground meat or liver and vegetables each day, the sore tongue and weakness per-

Fig. 3 (case 2).—Appearance on July 18, 1945, showing the tongue following the administration of iron to the patient.

sisted until December 11. On this date the tongue showed an increase of the areas of redness, with definite papillary atrophy. The invasion of the cornea persisted. Treatment was instituted with 16 mg. of pyridoxine daily for a period of one week, with no improvement. The yeast therapy was then resumed.

On Jan. 8, 1941 ferrous sulfate in doses of 0.3 Gm. three times a day was prescribed. On February 5 the patient had

no sore tongue and the filiform papillae were numerous. The angular stomatitis had disappeared. The dysphagia was definitely lessened. The corneal invasion was still present on slit lamp examination. On March 5 the progress note recorded continuous and definite improvement since the moment iron was started. The iron therapy was continued, and on May 2 the hemoglobin level had reached 14.0 Gm. and the red cell count was 4.38 million. Gastric analysis showed no free hydrochloric acid after an alcohol test meal. The administration of ferrous sulfate was discontinued. The patient has been followed in numerous clinics through Oct. 9, 1945, with no return of the oral lesions or of the dysphagia.

This is again a case of Plummer-Vinson syndrome and illustrates the complete absence of any effect on the oral lesions or the dysphagia of the administration of B vitamins and the prompt and complete response to iron.

CASE 4.—Mrs. R. D., aged 36, white, a quintigravida, who was seen on Sept. 9, 1943 during the course of a nutrition survey, had symptoms of a sore tongue and of fissures at the angles of the mouth for the past two months. About two months before she had noted a lower abdominal mass. On physical examination there were noted lesions at the angles of the mouth described as "honeycomb" crusts on a pink base. The tongue exhibited irregular atrophic areas. A lower abdominal mass, interpreted as a uterine fibroid, was palpated. Otherwise the routine physical examination was not remarkable. The cornea, examined with the slit lamp, showed definite capillary invasion. There was no photophobia. Laboratory examination revealed hemoglobin 9.3 Gm., erythrocytes 4.04 million, packed cell volume 30 per cent, plasma ascorbic acid 0.1 mg., plasma carotene 176 international units per hundred cubic centimeters, plasma vitamin A 69 international units per hundred cubic centimeters, total serum protein 6.7 Gm. per hundred cubic centimeters. The daily dietary intake calculated from a one week record included 0.91 mg. of thiamine, 1.07 mg. of riboflavin and 8.2 mg. of niacin and 1,650 calories.

Reexamination on October 11 revealed an identical condition of the eyes, tongue and lips. Treatment was instituted with ferrous sulfate 0.3 Gm. twice a day, plus riboflavin 5 mg. three times a day orally. On October 26 there was a definite subjective improved sense of well being, and the tongue and mouth were not sore. The oral lesions had completely healed. The corneal invasion persisted. The same therapy was continued. On November 11 the mouth and tongue were still normal, the corneal findings unaltered. The hemoglobin on this date was 13.0 Gm., the packed cell volume was 43 per cent and the red cell count was 4.92 million.

The findings in this case suggested a diagnosis of ariboflavinosis, but the failure of a response of the ocular lesions [22] and the reasonably satisfactory level of intake of riboflavin seem to contradict such a diagnosis. In view of the coexisting iron deficiency, the typical appearance of the lingual lesions and the response of the oral lesions alone, it now seems more reasonable to attribute these oral lesions to the lack of iron. At the time, however, it was thought that this response of the oral lesions was due to the riboflavin. This illustrates the confusion which may arise in the interpretation of the efficacy of a therapeutic agent unless the agents are tested separately, a point not always appreciated in published case reports.[23]

CASE 5.—Mrs. M. L., aged 33, white, octigravida, was first admitted to the gynecologic service in October 1942 for a plastic repair of a cystocele and rectocele. There was no glossitis or cheilosis, and the hemoglobin concentration was 12.2 Gm. with a red cell count of 4.51 million. On April 29, 1943 the patient was referred to the medical service with the complaint of cracks in the corners of her mouth and occasional soreness of her tongue. During the previous month she had been given B complex syrup 4 cc. three times a day, with no improvement. The patient's dietary history and calculated dietary intake were reasonably adequate, with an average daily intake from food of 2.0 mg. of riboflavin, 1.5 mg. of thiamine and 8.66 mg. of niacin and 1,840 calories.

Physical examination revealed that the patient was underweight and worn (weight 87 pounds [39.5 Kg.] height 61 inches [155 cm.]). There were fissures at the angles of the mouth and atrophy of the papillae over the tip of the tongue. Slight photophobia was present, and on slit lamp examination there was grade 2 capillary invasion of the cornea. The laboratory findings of interest were hemoglobin 11.0 Gm., red blood cell count 4.10 million, packed cell volume 37 per cent. The serum carotene, vitamin A, ascorbic acid and serum proteins were within normal limits.

The patient was continued on the same dosage of B complex syrup with the additional administration of 5 mg. of riboflavin daily. No improvement had occurred in the oral signs or the corneal invasion by May 14. On the latter date pyridoxine 50 mg. three times a day was added to the other B vitamins which the patient was receiving. The mouth lesions seemed much improved by May 28, and the pyridoxine was discontinued. The oral lesions reappeared at intervals, however, and the supplementary B complex syrup was continued intermittently with or without the addition of brewers' yeast until Jan. 9, 1945. On this date the patient again had fissures at the corners of the mouth which did not respond to therapy with 12 Gm. of yeast three times a day.

On February 22 the patient returned complaining of the fissures at the angles of her mouth. The hemoglobin concentration was 11.0 Gm. Ferrous sulfate 0.3 Gm. three times a day was prescribed in addition to the yeast. On March 15 there was no soreness of the mouth. The packed cell volume had risen to 40 per cent. During the subsequent nine months there has been no recurrence of the angular fissures, and the tongue has remained normal in appearance. On April 30 the hemoglobin was 12.5 Gm., the packed cell volume 43 per cent and the erythrocyte count 4.40 million.

The recurring perlèche and atrophy of the tip of the tongue of this patient appeared after the development of a mild anemia of the iron deficiency type; it recurred despite therapy with B vitamins but has remained cured for nine months following the administration of iron. This treatment with iron resulted in a small but definite increase in the concentration of hemoglobin.

CASE 6.—E. McN., a Negro woman aged 24, secundigravida, was receiving treatment for syphilis. During her last pregnancy (1941-1942) a single hemoglobin determination was recorded as 10.1 Gm. On Jan. 25, 1944 the patient presented herself with the complaint of lesions at the corners of the mouth for the past two weeks. Crusted, ulcerated lesions were present at the angles of the mouth. A history was given of excessive menstrual bleeding which necessitated bed rest during the past four menstrual periods. The hemoglobin concentration was 8.2 Gm., with an erythrocyte count of 3.80 million. Radioactive iron absorption studies showed an uptake of 34 per cent of a 15 mg. test dose. No therapy was instituted. On February 15 there had been a constant vaginal bleeding for two weeks. The hemoglobin was now 5.7 Gm. and the red cell count was 2.90 million. A second radioactive iron absorption showed a 55 per cent uptake of a 15 mg. dose. On February 24 treatment was instituted with ferrous sulfate 0.3 Gm. three times a day. The hemoglobin rose from 6.0 Gm. on this date to 10.0 Gm. on March 9. On the latter date the perioral lesions were almost healed. On April 13 the patient was completely asymptomatic. On July 25 her hemoglobin was 12.0 Gm. and red blood cell count was 5.0 million. She has experienced no recurrence of the oral lesions.

22. Sydenstricker, V. P.; Sebrell, W. H.; Cleckley, H. M., and Kruse, H. D.: The Ocular Manifestations of Ariboflavinosis, J. A. M. A. **114**: 2437 (June 22) 1940.

23. Murphy, R. G., and Damarjian, E.: Riboflavin Deficiency with Idiopathic Hypochromic Anemia, Rhode Island M. J. **23**: 114 (July) 1940. Sevringhaus and Kyhos.[2]

This woman represents an iron deficiency due to excessive blood loss and accompanied by the development of angular fissures. These fissures, as well as the anemia, responded promptly to therapy with iron alone.

COMMENT

The representative cases studied are interpreted as indicating that iron deficiency alone may be manifested by fissures at the labial commissures and a superficial glossitis. Such an interpretation is consistent with the experience of Suzman,[24] who reported 4 cases of Plummer-Vinson's syndrome with such oral lesions which healed rapidly following iron administration. It is of considerable interest that 1 of the cases which he described was treated for eleven days with liver extract No. 343, N. N. R., with no improvement in the oral lesions until iron was added. Furthermore, Waldenström[17] reported 4 cases of such oral lesions accompanying hypochromic anemia which responded to treatment with iron alone. He implied that an additional 4 patients in his series showed similar responses. All of these experiences confirm the conclusion of Waldenström[17] that these lesions of the mucosa and the dysphagia are both cured by sufficient administration of iron with no other therapy.

That these lesions are often confused with the oral signs of B complex deficiencies is evident from the therapeutic measures which were first instituted in most of the cases reported. The records of these individuals cover a sufficient period of time so that there is no doubt of the ineffectiveness of B vitamin preparations and of the efficacy of iron. No relapses during iron therapy have been observed in any of these subjects, in contrast to some of the reported cases of ariboflavinosis.[25] The therapeutic response to iron has been rapid (one to three weeks), again in contrast to the lesions of the tongue attributed to "chronic niacin deficiency."[26] The regeneration of the lingual papillae in iron deficiency has not been influenced by the administration of B complex vitamins.

It is of interest to point out that a number of the cases of glossitis or perlèche which have been reported as yielding slowly to vitamin therapy or of relapsing during or immediately following treatment[25] have been accompanied by anemias of the degrees seen in the cases here reported. Further, on occasions the use of combined iron and vitamin therapy has led to the disappearance of oral lesions, and the success has usually been attributed to the vitamins. Thus, Murphy and Damarjian[23] administered iron and riboflavin to a woman with anemia and cheilosis and ascribed the cure of the angular fissures to the vitamin therapy.

The appearance of the tongue in the cases reported has been somewhat characteristic. The descriptions all indicate a "blotchy, irregular denudation of the papillae," "absence of epithelial tufts" of the filiform papillae and often "dusky red irregular spots." None of these tongues have appeared scarlet like the glossitis of pellagra. It is of interest to compare the tongue depicted in figure 1 with that illustrated by Vinson and Schmidt[11] in a case of Plummer-Vinson syndrome. Both appear swollen with atrophic margins and "dusky spots." In case 1 there was no dysphagia. The bearing of these findings on the etiologic relationship of the oral lesions of the Plummer-Vinson syndrome is obvious. It is unnecessary to regard these signs as manifestations of a secondary vitamin deficiency, as has sometimes been done, but rather they are to be considered as part of the manifestations of iron want unless they fail to respond to adequate doses of iron. Furthermore, cases 1, 4, 5 and 6 reported here and case 11 of Waldenström[17] illustrate that the oral lesions may occur in absence of dysphagia.

It is not my intention to deny that a deficiency of riboflavin, niacin or other B complex factors may and sometimes does give rise to glossitis or cheilosis. Rather, it is emphasized that another cause of these signs is iron deficiency. Stomatitis due to the latter deficiency is now encountered much more frequently in the Vanderbilt Hospital Nutrition Clinic than is riboflavin or niacin deficiency cheilosis and glossitis.

This fact has prompted a study of the correlation of such oral signs occurring within the general adult population and the hemoglobin levels of the population. A composite of data to be published elsewhere tabulated from the results of three separate nutrition surveys[27] suggests that there is a much more frequent association of these signs with low hemoglobin levels than with high hemoglobin levels. Again, this illustrates the unreliability of a single clinical sign as the sole evidence for assessing the nutriture of a population.

SUMMARY

Six cases were observed which illustrate that angular fissures and superficial glossitis may accompany chronic iron deficiency anemia of mild degree. Certain of these cases responded to iron therapy alone; others responded to iron administration after they had failed to yield to prolonged intensive treatment with various B vitamin preparations.

Iron deficiency alone is a common cause of such oral lesions whether or not the lesions are accompanied by the dysphagia of the Plummer-Vinson syndrome.

Iron deficiency should be considered in the interpretation of the significance of such oral changes as are recorded in nutrition surveys.

24. Suzman, M. M.: Syndrome of Anemia, Glossitis and Dysphagia, Arch. Int. Med. **51**: 1 (Jan.) 1933.
25. Sydenstricker, V. P.; Geeslin, L. E.; Templeton, C. M., and Weaver, J. W.: Riboflavin Deficiency in Human Subjects, J. A. M. A. **113**: 1697 (Nov. 4) 1939. Sebrell, W. H., and Butler, R. E.: Riboflavin Deficiency in Man (Ariboflavinosis), Pub. Health Rep. **54**: 2121 (Dec. 1) 1939.
26. Kruse,[1] Sevringhaus and Kyhos.[2]
27. Surveys of Alamance County, N. C.,[19] and of two areas in Tennessee. The latter data were made available for study by Col. John B. Youmans.

The Value of Science.—That scientific knowledge can be applied to the material welfare of man is so obvious that no discussion of this value of science is necessary. Those who think that science has other values do not minimize its contributions to the feeding of human beings and their protection from the elements and from ill health. There are those, however, who deny that science has any value apart from these contributions to material welfare. Four grades may be distinguished in the scale of opinion: 1. Science has value only in serving the material wants of man. The only consideration is the material welfare of the community as a whole. This is the extreme totalitarian position. 2. Science has value in serving the material wants of man, but research workers do their best work if they enjoy it. 3. Science has value both in serving the material wants of man and also in enabling people to escape from certain mental evils. The study of science prevents unhappiness consequent on pettiness of outlook and produces forgetfulness of unpleasant memories. This rather negative position is that of Bertrand Russell. 4. Science has another value besides serving the material wants of man and enabling people to escape certain mental evils: it has a positive primary value as an end in itself, like music, art and literature.—Baker, John R.: Science and the Planned State, New York, Macmillan Company, 1945.

THE PROBLEM OF THE DANGEROUS CARRIER OF HEMOLYTIC STREPTOCOCCI

III. The Chemotherapeutic Control of Nasal Carriers

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The prevalence of epidemics of streptococcic [1] infection in the armed forces during World War II [2] has focused attention on the relation of "dangerous" carriers [3] of hemolytic streptococci to the spread of disease.[4] Exploration of this problem has shown that nasal carriers of these micro-organisms are more likely to transmit infection than throat carriers with negative nose cultures.[5] The reason for this is that the nasal carrier provides a much larger bacterial dosage for the infection of susceptible individuals than does the throat carrier, as demonstrated by quantitative cultures of the environment, including the air.[6] These facts apply equally well to hospitalized patients and to ambulatory carriers in army barracks.[7]

It was therefore important to know whether the nasal carrier state could be eliminated or modified by modern chemotherapeutic agents, for suppression of the dissemination of hemolytic streptococci by carriers would have many practical applications. Moreover, the suppressive action of sulfadiazine on streptococci in the nose would be of interest in an explanation of the mechanism of mass prophylaxis, which has heretofore been interpreted as due solely to the bacteriostatic effect of sulfadiazine in the mucous membranes of susceptible individuals.

Valuable technical assistance was rendered by Miss Valerie Hurst, Mrs. Margaret J. Green and Mrs. Ann Thompson.

From the Commission on Airborne Infections, Army Epidemiological Board, Preventive Medicine Service, Office of the Surgeon General, U. S. Army, and the Department of Medicine, University of Chicago.

Lieut. Robert M. Dalyrimple, M. C., served as liaison officer for the commission at Fort Douglas, Utah, where some of these investigations were carried out. He contributed much of his time and energy and was solely responsible for the culture surveys made during the period of treatment of carriers at Fort Douglas.

The cooperation of the medical officers at Fort Lewis, Washington, and Fort Douglas made possible the studies herein reported. They were Col. Arthur R. Gaines, commanding officer, Madigan General Hospital, and his successors, Col. W. G. Jenkins and Col. Maxwell Keefer; Lieut. Col. R. E. Tennant, executive officer; Col. Edgar Durbin, chief of the medical service; Major Harold Goler, chief of the respiratory disease service; Col. Luther R. Moore, surgeon, Ninth Service Command, Fort Douglas; Col. Irving S. Wright, medical consultant, Ninth Service Command, Lieut. Col. J. W. R. Norton, chief of preventive medicine, Ninth Service Command, Lieut. Col. W. G. Mitchell, commanding officer, Station Hospital, Fort Douglas, Major Lloyd W. Robinson, chief of the medical service, and Lieut. Irving Imber, chief of the labor service.

1. The terms "streptococcus" and "hemolytic streptococcus" in this paper are used to indicate beta hemolytic streptococcus.

2. Schwentker, F. F.: The Relation Between Scarlet Fever Morbidity and Streptococcus Carrier Rates, Am. J. Hyg. **38:** 207-210, 1943. Schwentker, F. F.; Hodes, H. L.; Kingsland, L. C.; Chenoweth, B. M., Jr., and Peck, J. L.: Streptococcal Infections in a Naval Training Station, Am. J. Pub. Health **33:** 1455-1460, 1943. Hamburger, Morton, Jr.; Hilles, Carolyn H.; Hamburger, Virginia G.; Johnson, Margaret A., and Wallin, Joanna G.: Ability of Different Types of Hemolytic Streptococci to Produce Scarlet Fever, J. A. M. A. **124:** 564-566 (Feb. 26) 1944. Holbrook.[26] Prevention of Respiratory Tract Bacterial Infections.[26]

3. The term "carrier" is used to indicate any one who harbors hemolytic streptococcus in the nose or throat, regardless of the presence or absence of active infection.

4. Coburn, A. F.: The Carrier Problem in the Dissemination of Hemolytic Streptococcus, U. S. Nav. M. Bull. **42:** 325-335, 1943. Hamburger.[12]

5. Hamburger, Morton, Jr.; Green, Margaret Johnson, and Hamburger, Virginia G.: The Problem of the "Dangerous Carrier" of Hemolytic Streptococci: II. Spread of Infection by Individuals with Strongly Positive Nose Cultures Who Expelled Large Numbers of Hemolytic Streptococci, J. Infect. Dis. **77:** 96-108, 1945.

6. Hamburger, Morton, Jr.; Green, Margaret Johnson, and Hamburger, Virginia G.: The Problem of the "Dangerous Carrier" of Hemolytic Streptococci: I. Number of Hemolytic Streptococci Expelled by Carriers with Positive and Negative Nose Cultures, J. Infect. Dis. **77:** 68-81, 1945.

7. Lemon, H. M., and others: Studies on Transmission of Respiratory Disease Within Army Barracks: II. The Air-Borne Spread of Hemolytic Streptococcal Infections Among the Enlisted Personnel, to be published. Hamburger and others.[5]

The effect of sulfonamides and of penicillin on hemolytic streptococci in the nasopharynx has been described by various investigators,[8] but the significance of nasopharyngeal cultures in carriers is not the same as that of nose cultures.[6] Meads and his associates [9] have reported that penicillin injected at three to four hourly intervals eliminated the nasal carrier state in 3 patients wth scarlet fever, though we are not familiar with similar reports dealing with sulfonamides. It is our purpose in this paper to describe our experience with the treatment of both hospitalized and ambulatory nasal carriers of group A streptococci at Fort Lewis, Washington, and Fort Douglas, Utah, with small doses of sulfadiazine or with calcium penicillin suspended in beeswax peanut oil. These preparations are suitable for use with ambulatory as well as hospitalized carriers.

METHODS AND MATERIAL

The following studies were made at the Madigan General Hospital, Fort Lewis, Washington, and in the Basic Training Section, Army Service Forces Training Center, Fort Lewis: Nose and throat cultures were made on soldiers admitted to the hospital with upper respiratory infection and those exhibiting cultures strongly positive for hemolytic streptococci selected for study. Some were treated as described later, while others served as untreated controls. There was no significant clinical difference between the two groups.

In the Basic Training Section nasal carriers of hemolytic streptococci were detected by periodic culture surveys of companies in training. In certain companies, arbitrarily selected, nasal carriers were treated as to be described and in other companies no carriers were treated. In both groups clinical and bacteriologic observations were continued as long as the men remained in their training units.

At Fort Douglas, Utah, sulfadiazine was administered to nasal carriers in an Army Student Training Program unit at the University of Utah in which an epidemic of streptococcic infection was taking place.

Types of Cultures Employed.—Four separate cultures for hemolytic streptococci were made in each hospitalized patient-carrier: (1) "noseblow cultures," (2) determination of the "streptococcus output," a measure of environmental contamination, (3) culture of nose swabs, (4) culture of throat swabs. Only the last two were performed on ambulatory carriers in barracks. A description of these methods follows.

"Noseblow" Cultures.—The number of streptococci expelled by blowing the nose was employed as a quantitative index of the effectiveness of treatment in the hospitalized nasal carriers and was determined in the following manner: The subject blew his nose into a sterile handkerchief and placed it in an Erlenmeyer flask containing 50 cc. of broth. After the flask was

8. Watson, R. F.; Schwentker, F. F.; Fetherston, J. E., and Rothbard, S.: Sulfadiazine in an Epidemic of Scarlet Fever, J. A. M. A. **122:** 730-733 (July 10) 1943. Rubenstein, A. D., and Foley, G. E.: The Effect of Chemotherapy on the Duration of the Carrier State Following Scarlet Fever, New England J. Med. **233:** 315-321, 1945. Julianelle, L. A., and Siegel, M.: The Epidemiology of Acute Respiratory Infections Conditioned by Sulfonamides: II. Gross Alterations in the Nasopharyngeal Flora Associated with Treatment, Ann. Int. Med. **22:** 10-20, 1945. Hamburger, Morton, Jr.: Studies on the Transmission of Hemolytic Streptococcus Infections: II. Beta Hemolytic Streptococci in the Saliva of Persons with Positive Throat Cultures, J. Inf. Dis. **75:** 71-78, 1944. Cecil, R. L.; Plummer, Norman, and Smillie, W. G.: Sulfadiazine in Treatment of Common Cold, J. A. M. A. **124:** 8-14 (Jan. 1) 1944. Plummer, Norman; Duerschner, D. R.; Warren, H. D.; Rogliano, P. T., and Sloan, R. A.: Penicillin Therapy in Hemolytic Streptococci Pharyngitis and Tonsillitis, ibid. **127:** 369-374 (Feb. 17) 1945. Commission on Acute Respiratory Diseases: A Study of a Food Borne Epidemic of Tonsillitis and Pharyngitis Due to Beta Hemolytic Streptococcus, Type 5, Bull. Johns Hopkins Hosp. **77:** 143-210 (Sept.) 1945.

9. Meads, Manson; Flinse, M. Eugene; Barnes, Mildred W., and Finland, Maxwell: Penicillin Treatment of Scarlet Fever, J. A. M. A. **129:** 785-789 (Nov. 17) 1945.

shaken for thirty seconds an aliquot was removed for making a blood agar pour plate, which was incubated overnight. The colonies of beta hemolytic streptococci were counted.[10]

"Streptococcus Output."—The "noseblow" culture represented the carrier's potential ability to contaminate his environment.[11] The actual environmental contamination was estimated by a method previously described [6] and consists in pinning or stapling a 5 inch square cotton patch to the bottom sheet of the carrier's bed at the level of the chest and leaving it in place overnight. The next morning the patch is removed and cultured as described under "Noseblow Cultures."

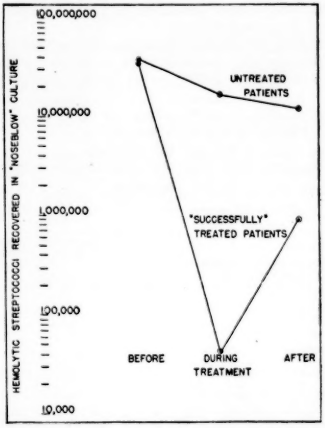

Chart 1.—Effect of 1 Gm. of sulfadiazine per day on the number of hemolytic streptococci recovered in "noseblow" cultures of hospitalized patient-carriers. Treatment was continued for from five to ten days, in most cases six days. In order to compare time periods as fairly as possible, the first to fifth hospital days of untreated patients are plotted on the same ordinate as "before treatment," the sixth to tenth as "during treatment" and the eleventh to fifteenth as "after treatment." Technic of noseblow culture is described in text. The curves represent the average of 23 untreated and 22 "successfully" treated patients. Note logarithmic scale.

Throat Culture.—A sterile swab was rubbed over the tonsils or tonsillar area and sometimes over the posterior pharynx as well. It was then inoculated directly on to a horse blood agar plate containing 0.1 per cent of para-aminobenzoic acid and the colonies spread with a loop. The plate was incubated for eighteen to twenty hours.

The method of reading plates, described elsewhere in detail,[12] estimates the number of colonies of beta hemolytic streptococci as strongly positive (+++), moderately positive (++) or weakly positive (+).

Nose Culture.—A cotton applicator was inserted gently into the nostril for a distance of 3 to 4 centimeters, rubbed against the mucous membranes and inoculated on to a quadrant or half of a horse blood agar plate. It was not necessary to spread the colonies with a loop. Incubation and reading of plates were the same as for throat cultures. Additional details of the technic have been described elsewhere.[6]

Identification of Beta Hemolytic Streptococci.—Beta hemolytic streptococci recovered before treatment, and when present during and after treatment, were grouped and typed by the method of Swift, Wilson and Lancefield.[13]

Sulfonamide Blood Levels.—The level of free sulfadiazine was determined almost daily in hospitalized carriers and semiweekly in ambulatory carriers. The method of Peters,[14] utilizing capillary blood, was found quite satisfactory for this purpose, when modified to permit the use of only 0.1 cc. of blood. The results obtained by this method correspond closely with those obtained by that of Bratton and Marshall.[15] A photoelectric colorimeter with a suitable filter was used to increase the sensitivity of the para-dimethyl-aminobenzaldehyde color reagent.

RESULTS

Effect of 1 Gm. of Sulfadiazine a Day on the Dispersal of Streptococci by Hospitalized Patient-Carriers.—Twenty-six patients with strongly positive nose cultures for group A streptococci were given 1 Gm. of sulfadiazine a day for five to ten days. The effectiveness of the drug was assessed by daily or nearly daily quantitative noseblow cultures, determination of the "streptococcus output" and nose and throat cultures.

Charts 1 and 2 demonstrate the reduction by sulfadiazine in the number of streptococci expelled by blowing the nose, and in the degree of environmental contamination as indicated by the "streptococcus output," in 22 of the 26 subjects. Moreover, the nose culture (swab) became negative in most but not all these patients in two to five days. It should be pointed out that the bacteriostatic effect was usually not

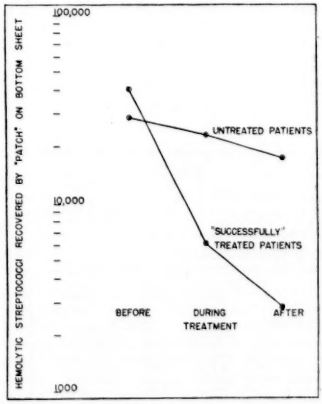

Chart 2.—Effect of 1 Gm. of sulfadiazine per day on the environmental contamination produced by patient-carriers with strongly positive nose cultures. See explanation of chart 1.

10. The importance of streptococci expelled by blowing the nose will be discussed in another communication.[11]

11. Hamburger, Morton, Jr., and Green, M. J.: The Problem of the Dangerous Carrier of Hemolytic Streptococci: IV. Observations on the Role of Blowing the Nose, of the Hands, Sneezing and Coughing in the Dispersal of These Micro Organisms, to be published.

12. Hamburger, Morton, Jr.: Studies on the Transmission of Hemolytic Streptococcus Infections: I. Cross Infections in Army Hospital Wards, J. Infect. Dis. **75**: 58-70, 1944.

13. Swift, H. F.; Wilson, A. T., and Lancefield, R. C.: Typing Group A Hemolytic Streptococci by M Precipitin Reactions in Capillary Pipettes, J. Exper. Med. **78**: 127-133, 1943.

14. Peters, J. T.: Easy and Accurate Method for Determination of Blood Sulfonamides from One Drop of Blood from the Finger Tip, J. A. M. A. **124**: 31-33 (Jan. 1) 1944.

15. Bratton, A. C., and Marshall, E. K., Jr.: New Coupling Component for Sulfanilamide Determination, J. Biol. Chem. **128**: 537-550, 1939.

observed until about forty-eight and occasionally seventy-two hours after the first dose. Of the 4 unsuccessfully treated carriers, 2 harbored sulfonamide resistant type 17 streptococci before treatment was started,[16] 1 did not achieve adequate blood levels and the fourth suffered from bilateral maxillary sinusitis.

Two additional points of interest were, first, that the streptococci returned to the nose, usually in relatively small numbers, after the cessation of therapy in 95 per cent of the patients and, second, that the throat culture often remained positive even though the nose culture and noseblow were rendered negative. Typical protocols are presented in table 1.

TABLE 1.—*Sulfadiazine Treatment of Hospitalized Nasal Carriers of Group A Streptococci*

Case 1. Type 14 streptococcus, sulfonamide susceptible.
Diagnosis, acute follicular tonsillitis, bilateral maxillary sinusitis.

Date 1945	Throat Culture	Streptococci Recovered from "Patch" on Culture of Right Nostril	Streptococci Recovered from "Patch" on Culture of Left Nostril	Streptococci Recovered from "Patch" on Bottom Sheet	Streptococci Recovered from "Noseblow" Culture	Sulfadiazine, Gm.	Sulfadiazine Blood Level, Mg. per 100 Cc.
2/15	+++*	++*	+++	107,000	20,500,000	0	
16	+++	+++	+++	190,000	14,000,000	0	
17	+++	+++	+++	20,000	1,350,000	1	
18	..	..	..	.....	.....	1	
19	0	+	0	2,500	500	1	2.6
20	0	0	++*	500	0	1	
21	+	0	0	0	1,000	1	
22	0	0	0	1,500	500	1	3.2
23	0	0	0	0	0	0	
24	0	0	0	2,500	0	0	
25	0	0	0	0	0	0	
28	+++*	++*	+	1,500	6,000	0	
3/1	+++	++*	0	500	28,500	0	
2	+++	++	+++	500	3,600,000	0	
5	+++*	0	++*	...	.....	0	
	March 5, discharged from hospital						
26	+++*	0	0				

Case 2. Type 1 streptococcus, sulfonamide susceptible.
Diagnosis, acute follicular tonsillitis

3/28	+++†	+++†	+++	18,500	52,500,000	0	
29	+++	++	+++	6,500	30,000,000	1	
30	+++	+++	+++	1,000	6,500	1	0.9
31	+++†	+++	++†	0	1,500	1	1.4
4/1	+++	0	+	0	0	1	
2	++	0	0	.....	0	1	1.5
3	++	0	0	0	0	1	1.5
4	+++	0	0	1,500	0	0	1.2
5	+	+†	0	.....	..	0	
7	+++	0	0	.....	0	0	
9	+++	0	0	500	0	0	
10	+++†	0	0	...	..	0	
	April 10, discharged from hospital						
13	++†	++	++†				
5/11	.....	+	+†				

Case 3. Type 17 streptococcus, sulfonamide resistant (to 125 mg. per hundred cubic centimeters, in vitro).
Diagnosis, scarlet fever; acute sinusitis; acute otitis media.

5/22	+	+++	+++	650,000	1,400,000,000	0
25	+++	+++	+++	.....	350,000	6
29	+++	+++	+++	450,000	210,000,000	6
31	++	++	+++	65,000	32,000,000	6
	May 22-31, total dose of sulfadiazine, 42 Gm.					

Case 4. Type 14 streptococcus.
Diagnosis, acute nasopharyngitis; acute sinusitis (x-ray, not clinical).

4/18	++	0	+++	0	17,000	0
19	+++	+++	+++	4,500	25,000,000	0
21	+++	+++	+++	20,000	22,500,000	0
24	+++	+++	+++	25,000	.....	0
25	++	++	+++	8,500	10,000,000	0
26	++	+++	+++	1,500	1,400,000	0
27	++	+++	+++	2,000	900,000	0
28	++	++	+++	22,000	13,750,000	0
30	+++	++	+++	500	49,000,000	0
5/3	+++	0	+++	1,500	8,500,000	0

* A colony from this culture was typed and identified as type 14.
† A colony from this culture was typed and identified as type 1.

16. Another carrier of sulfonamide resistant (before treatment) type 17 streptococci, who produced as great environmental contamination as we have ever observed, was treated with 6 Gm. of sulfadiazine per day (table 1). He continued to disperse great numbers of type 17 streptococci and infected four nearby patients with this organism.

Treatment of Ambulatory Nasal Carriers with 1 Gm. of Sulfadiazine per Day.—The assessment of therapy of ambulatory carriers is less satisfactory than that of hospitalized carriers because they are more difficult to control and because observations cannot be made as frequently as in hospitalized persons. The present series includes only men whose noses were swabbed sufficiently often to permit an evaluation of their cultures five days after the first strongly positive nose culture.

Experience in treating nasal carriers where streptococcic disease was epidemic was provided by an outbreak in the spring of 1945 in an Army Student Training Program unit whose personnel was hospitalized at Fort Douglas, Utah. The carriers received 1 Gm. a day for thirty-two days. Here the effectiveness of treatment appeared to be directly related to susceptibility of the organisms to sulfonamide, for 90 per cent of 29 sulfonamide sensitive type 19 strains responded quickly, whereas 83 per cent of 6 sulfonamide resistant type 17 strains failed to respond.[17] The contrast between these type 17 and 19 cultures is illustrated in charts 3 and 4. Not only did the type 17 strains resist the action of sulfadiazine in the carriers, but they actually infected several other individuals, including

TABLE 2.—*Sulfadiazine Treatment of Ambulatory Nasal Carriers of Hemolytic Streptococci at Fort Lewis and Fort Douglas*

	Per Cent of Carriers Whose Nose Cultures Were Negative or + 3 Days After Initial +++ Culture	Average Duration of Treatment, Days	Number of Carriers
Fort Douglas carriers, streptococcus type 19, sulfonamide sensitive	90	32	29
Fort Douglas carriers, streptococcus type 17, sulfonamide resistant	17	32	6
Fort Lewis carriers, streptococcus types 1, 3, 6, 11, 12, 14, 17, 19, sulfonamide sensitive	68	23	19
Fort Lewis carriers, untreated	34	0	29

The sulfonamide sensitivity refers to tests of strains recovered prior to treatment.

TABLE 3.—*Nose Culture Relapse Rate of Sulfadiazine Treated Hospitalized Patient-Carriers and Ambulatory Carriers at Fort Lewis*

	Average Duration of Treatment, Days	Sulfadiazine per Day, Gm.	Relapse Rate, per Cent	Number of Subjects
Hospitalized patient carriers	7	1	95	22
Ambulatory carriers	23	1	23	13

TABLE 4.—*Sulfadiazine Blood Levels of Carriers Treated at Fort Lewis and Fort Douglas*

	Milligrams per 100 Cc.	
	Average	Range
Fort Lewis, hospitalized	1.31	0.2-5.5
Fort Lewis, ambulatory	1.76	0.3-5.3
Fort Douglas, ambulatory	2.3	Trace-3.4

17. The sulfonamide sensitivity of these strains was tested in vitro by the method of A. T. Wilson (Method for Testing in Vitro Resistance of Group A Hemolytic Streptococci to Sulfonamides, Proc. Soc. Exper. Biol. & Med. 58: 130-133, 1945), and in tryptose phosphate broth enriched with horse serum. These studies will be reported elsewhere.

successfully treated carriers of type 19 who were still receiving the drug.

At Fort Lewis, where streptococcic disease was not epidemic, carriers were detected by periodic surveys.

TABLE 5.—*Levels of Penicillin in Blood Serum Following a Single Intramuscular Injection of 300,000 Units in Beeswax Peanut Oil: Reports of Various Investigators*

Investigators	Oxford Units Per Cc. of Serum at Different Times After Injection of Penicillin: 12 Hours	24 Hours	Number of Cases
Nichols and Hounz [22]	0.18	0.03	8
Romansky and Rittman [21]	0.039-0.625	0.000-0.625	87
Kirby and others [20]	0-0.2	0	54

Sixty-eight per cent of 19 treated carriers exhibited negative or very weakly positive nose cultures by the end of five days, as contrasted with 34 per cent of 29 untreated carriers who underwent spontaneous remissions during that time. The data on the ambulatory carriers are summarized in table 2.

Nose Culture Relapses in Sulfadiazine Treated Carriers.—When treament was discontinued after five to ten days, as was done with the hospitalized patient-carriers, the relapse rate was very high, 95 per cent, as contrasted with 23 per cent in the ambulatory carriers treated for an average of twenty-three days. These data are summarized in table 3.

Much of this difference may be due to the duration of treatment, since a similarly high relapse rate was seen in several ambulatory nasal carriers in whom treatment terminated after a few days.

Follow-up data after the cessation of treatment were not available on the Fort Douglas men.

Sulfadiazine Blood Levels.—Levels were determined on hospitalized men every one to three days and on ambulatory carriers once or twice a week. The average levels are presented in table 4.

Toxic Reactions to Sulfadiazine.—Untoward reactions were uncommon. The only objective reaction was the appearance of a morbilliform rash in 3 of the ambulatory carriers at Fort Lewis and Fort Douglas. Two men complained of feeling tired while taking the drug.

The Effect of Calcium Penicillin in Beeswax Peanut Oil.—Though the action of penicillin on hemolytic streptococci is very rapid, the necessity of injections every three to four hours has rendered its use impracticable in the treatment of ambulatory carriers; but the recent development of a suspension which is so slowly absorbed from the tissues [18] that only one injection a day may be necessary suggested a trial of this material. Accordingly, two lots of calcium penicillin suspended in 4.8 per cent beeswax by weight in peanut oil were sent us by Capt. Monroe J. Romansky of the Army Medical School. Each cubic centimeter contained 300,000 units of penicillin.

Though the treatment of both ambulatory and hospitalized carriers is the ultimate goal in the use of this material, the clinical trials were conducted on hospitalized carriers because daily careful observation was deemed important. The 14 subjects were divided into two groups: 7 patients still acutely ill and 7 ambulatory patients detained past the time when the ward officer would have discharged them. The latter served as true examples of postinfection healthy carriers. Though the number of cases in the series is small, they illustrate the advantages and shortcomings of this preparation.

One cc. was injected daily into the deep muscles of the upper outer quadrant of the buttock on alternate sides each day. Ten men received five daily injections, 2 men six and 2 men seven. Twelve of the 14 subjects experienced but slight discomfort in the buttock and stated that they believed they could perform full duty while under treatment. One of the other two experienced severe pain along the leg for several hours, and one man complained of severe pain and tenderness at the site of injection lasting nearly twenty-four hours.

The bacteriologic study followed the plan of the patients treated with sulfadiazine, and the findings are summarized in table 5. The immediate results were dramatic. In every case the streptococci in the "nose-blow" culture [19] were either eliminated or diminished

TABLE 6.—*Hospitalized Nasal Carriers Treated with Calcium Penicillin in Beeswax Peanut Oil*

No.	Diagnosis and Streptococcus Type	Days in Hospital Before Treatment	Total Dose, Oxford Units	Streptococci Recovered in Nose Blow Culture * Before	During Treatment	After	Streptococcus Output † Before	During Treatment	After	Nose Culture Before	During Treatment	After	Throat Culture Before	During Treatment	After
1	Tonsillitis; sinusitis (x-ray) (36)	11	1,200,000	74,000,000	0	0	43,500	500	0	+++	0	0	+++	0	0
2	Tonsillitis (19).....	8	1,500,000	5,425,000	0	0	22,000	0	0	+++	0	0	+++	0	0
3	Tonsillitis (1).....	4	1,500,000	1,500,000	0	0	1,000	0	0	+++	0	0	+++	0	0
4	Pharyngitis (14)....	4	1,200,000	25,000,000	0	0	4,500	0	0	+++	0	0	+++	0	0
5	Acute sinusitis (36)..	5	1,500,000	6,950,000	3,200	0	5,000	0	0	+++	± 0	0	+++	0	0
6	Acute sinusitis; acute otitis media (17)	10	1,980,000	72,500,000	100	0	187,500	2,500	0	+++	0	0	+++	0	+++
7	Tonsillitis; sinusitis (6)	4	1,500,000	933,000	1,500	0	272,500	26,500	0	+++	++0	0	+++	0	0
8	Tonsillitis (17).....	11	1,500,000	50,000,000	100	0	125,000	500	0	+++	0	0	+ ++	0	0
9	Acute sinusitis (6)..	3	1,500,000	50,000,000	100	720,000	1,000	0	10,000	+++	± 0	+++	+++	± 0	+++
10	Pharyngitis; acute sinusitis (19)	5	2,100,000	2,850,000	0	15,000	65,000	0	0	+++	0	+++	+++	0	+++
11	Tonsillitis; sinusitis (x-ray); scarlet fever (17)	13	1,350,000	76,500,000	0	470,000	750,000	0	500	+++	0	+++	+++	0	+++
12	Pharyngitis (19).....	6	1,500,000	658,000	3,200	32,400	65,500	14,000	6,500	+++	0	++	+++	0	+++
13	Tonsillitis; sinusitis; scarlet fever (3)	3	1,400,000	512,500,000	200	430,500	52,500	8,000	50,000	+++	0	+++	+++	0	+++
14	Pharyngitis (12)....	4	1,800,000	1,332,000	3,000	575,500	38,000	1,000	500	+++	++0	+++	+++	0	++

* Nose blow cultures are expressed as the average of several cultures made in the before, during and after treatment periods.
† The streptococcus output is the number of streptococci recovered by the highest of several patches cultured in the before, during and after periods.

18. Romansky, M. J., and Rittman, G. E.: A Method of Prolonging the Action of Penicillin, Science **100:** 196-198, 1944.
19. Penicillinase 2,500 units, supplied by Captain Romansky and Dr. A. J. Liebmann of the Schenley Laboratories, was added to the flask containing the "noseblow" material to inactivate any penicillin which might have been carried over in the nasal secretion. The flask was incubated at 37 C. for fifteen minutes before an aliquot was removed for making a pour plate.

by more than 98 per cent after the first injection of penicillin. The nose and throat swab cultures and the "streptococcus output" followed the same pattern.

Blood levels were not measured, though the bacteriologic results suggest that absorption may have been irregular in some cases. The levels encountered by other investigators using this preparation have varied considerably, however, and are summarized in table 6. The most striking difference between two large well studied series was the finding in one [20] that no penicillin could be demonstrated in the blood serum twenty-four hours after the intramuscular injection of 1 cc. of 300,000 units of calcium penicillin in beeswax peanut oil, whereas bactericidal concentrations were detected in most patients in the other series.[21] Bactericidal concentrations were demonstrated at the end of twenty-four hours in a third small group of cases,[22] but the method employed for measuring blood levels differed from that used in the two larger series.

Relapses Following Penicillin.—In 7 of the 14 carriers the noseblow, nose culture, throat culture and streptococcus output remained entirely negative for follow-up periods of eleven to seventy-two days after the last injection. In other words, the carrier state was effectively and probably permanently eradicated. One carrier suffered a relapse of his throat culture seventeen days after the cessation of treatment, but his nose remained free from streptococci.

Relapses of nose culture, noseblow and throat culture occurred in the remaining 6 carriers within one to five days after the last injection of penicillin, though only 2 dispersed many streptococci into the environment. It was of course important to analyze as far as possible the reasons for these relapses. Because of the equal distribution of certain factors among the carriers who did and who did not relapse, these factors could be ruled out as at least constant sources of failure. They were (1) streptococcus type, (2) presence or absence of sinusitis, (3) total dose of penicillin, 2 men receiving 2,100,000 and 1,800,000 units being among the failures, (4) duration of positive culture before treatment, (5) presence of tonsils and (6) sensitivity of the streptococci to penicillin.[23] Unfortunately, the absence of penicillin blood levels renders it impossible to say whether absorption was always adequate.

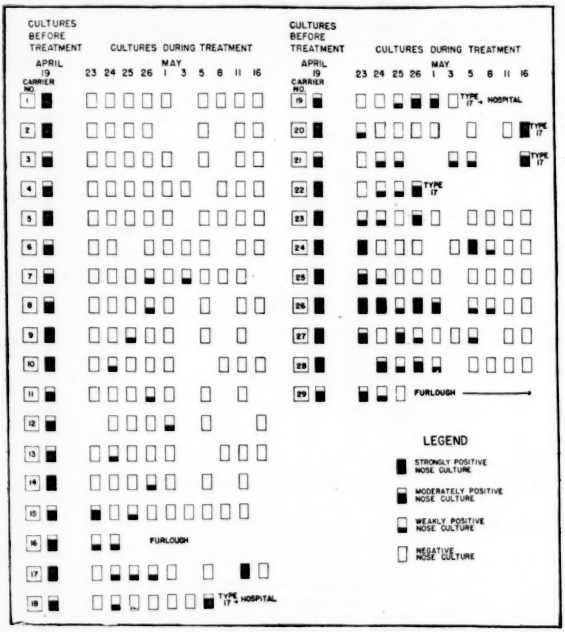

Chart 3.—Effect of 1 Gm. of sulfadiazine per day on the nose culture of ambulatory carriers of type 19 streptococci. These strains were susceptible to sulfadiazine in vitro. Note that several carriers became infected with sulfonamide resistant type 17 streptococci while they were still receiving sulfadiazine.

COMMENT

The primary aim in the treatment of carriers of any pathogenic microorganism is the complete eradication of the carrier state. When this cannot be accomplished, as is often the case, the next goal is to render the carrier as harmless as possible.

The prompt and lasting elimination of all hemolytic streptococci from the nose and throat of a carrier can be effected in many cases by penicillin in beeswax peanut oil injected once a day for five to seven days. Moreover, the majority of those carriers who relapsed after termination of treatment failed to disperse large numbers of streptococci into the environment. Therefore a method is now available for controlling well over half the dangerous carriers in event of an epidemic. Furthermore, if the cause of relapse in certain cases in the present series was inadequate absorption of penicillin, as suggested by the studies of Kirby and his associates,[20] an increase in dosage may offer hope of a substantial augmentation of the number of individuals in whom the carrier state is completely eradicated. Their data suggest also that subcutaneous administration of 300,000 units in beeswax peanut oil may provide adequate blood levels. However, since the levels achieved by this group after intramuscular injection are considerably lower than those reported by Romansky and Rittman [21] the problem obviously needs further investigation. Finally, the prompt suppression of the

20. Kirby, W. M. M.; Leifer, William; Martin, S. P.; Rammelkamp, C. H., and Kinsman, J. Murray: Intramuscular and Subcutaneous Administration of Penicillin in Beeswax-Peanut Oil, J. A. M. A. **129:** 940-944 (Dec. 1) 1945.

21. Romansky, M. J., and Rittman, G. E.: Penicillin Blood Levels for Twenty-Four Hours Following a Single Intramuscular Injection of Calcium Penicillin in Beeswax and Peanut Oil, New England J. Med. **233:** 577-582, 1945.

22. Nichols, D. R., and Haunz, E. A.: Prolonged Action of Penicillin in Mixtures of Beeswax and Peanut Oil, Proc. Staff Meet., Mayo Clin. **20:** 403-407 (Oct. 31) 1945.

23. The in vitro sensitivity to penicillin of strains recovered from 3 patients after relapse and of two strains recovered before treatment from patients who did not suffer relapse was tested by Mrs. Lida H. Mattman by a simple unpublished method developed in the laboratory of the Harrison Department of Surgical Research, University of Pennsylvania School of Medicine. The penicillin sensitivity of all of these five strains was the same.

carrier state, associated with considerable reduction in the dispersal of streptococci into the environment of every treated carrier, is significant, even though relapses often occur.

In view of the efficacy of penicillin and the appearance of epidemics of sulfadiazine resistant streptococcic disease following mass sulfonamide prophylaxis,[24] the circumstances under which sulfonamide treatment of nasal carriers may be advisable must await further experience. It is possible that, in small groups where penicillin may not be available, nasal carriers of sulfonamide susceptible hemolytic streptococci may be profitably given sulfadiazine for three to four weeks. This can apparently be done without danger of sensitizing the patient.[25]

The role played by sulfadiazine given as mass prophylaxis in preventing the dissemination of hemolytic streptococci from nasal carriers is of interest in considering the mechanism of the initial success of the programs carried out by the Navy and the Air Forces in 1944.[26] Though it has been well recognized that sulfonamide drugs fail to eliminate streptococci from the throats of most carriers,[8] there has heretofore been no information concerning their effect on the dispersal of streptococci from the upper respiratory tract. The results reported in this paper suggest that sulfadiazine, in addition to creating in susceptible hosts an environment unfavorable to the implantation of sulfonamide sensitive streptococci, also hinders their dissemination by dangerous carriers. Moreover, the failure of sulfadiazine to reduce environmental contamination resulting from carriers of sulfonamide resistant strains could explain the ultimate replacement of sensitive by resistant strains in the treated population.

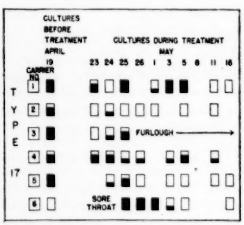

Chart 4.—Lack of effect of 1 Gm. of sulfadiazine per day on the nose culture of ambulatory carriers of type 17 streptococci. All these strains were resistant to sulfadiazine in vitro. See legend of chart 3.

SUMMARY

1. The effect of sulfadiazine and of slowly absorbed penicillin on group A hemolytic streptococci in the nose of carriers and on their dispersal into the environment has been investigated.

2. One Gm. of sulfadiazine a day eliminated or reduced the numbers of sulfonamide sensitive streptococci in the nose and inhibited the dispersal of these organisms into the environment in about 80 per cent of cases. It was ineffective against sulfonamide resistant streptococci.

Streptococci of the same serologic type reappeared in the nose after the cessation of treatment in 95 per cent of carriers treated for five to ten days but in only 23 per cent of carriers treated for an average of twenty-three days.

3. The inhibitory effect of "prophylactic doses" of sulfadiazine on the dispersal of sulfonamide susceptible streptococci by carriers suggests that a direct effect on the carrier state probably played an important role in the initial success of the mass prophylaxis of streptococcic disease carried out by the Navy and Air Forces in 1944.

4. Calcium penicillin in beeswax peanut oil was administered to 14 carriers in a dosage of 300,000 units in 1 cc. a day intramuscularly for five to seven days. Prompt and permanent eradication of both nose and throat carrier state and of the dispersal of hemolytic streptococci occurred in 50 per cent of these carriers. In the other 50 per cent streptococci were eliminated or reduced by more than 98 per cent in number during the administration of the penicillin, though relapse took place after it was terminated. Most of the carriers in whom relapse occurred dispersed very few streptococci into their environment.

5. Calcium penicillin in beeswax peanut oil can be administered to most ambulatory carriers in daily 1 cc. doses intramuscularly without interference with their normal activities.

24. Sulfadiazine Resistant Strains of Beta Hemolytic Streptococci: Appearance During the Course of Sulfadiazine Prophylaxis at a Large Naval Training Center, Epidemiology Unit Number 22, J. A. M. A. **129:** 921-927 (Dec. 1) 1945.

25. Coburn, A. F.: Mass Sulfadiazine Prophylaxis of Respiratory Diseases in the U. S. Navy, Bull. New York Acad. Med. **21:** 281-301, 1945.

26. Prevention of Respiratory Tract Bacterial Infections by Sulfadiazine Prophylaxis in the United States Navy, United States Navy Department, Bureau of Medicine and Surgery, 1945. Holbrook, W. P.: The Army Air Forces Rheumatic Fever Control Program, J. A. M. A. **126:** 84-87 (Sept. 9) 1944.

NONOPERATIVE TREATMENT OF OSTEOMYELITIS WITH PENICILLIN

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In a preliminary report [1] the advantages of treating chronic osteomyelitis with penicillin and a wetting agent (sodium tetradecyl sulfate) were presented. Seven of the most severe cases that have been observed since publication of our earlier report will now be reviewed by way of confirmatory evidence on the soundness of the procedure.

At the present time, results obtained by nonoperative treatment of chronic osteomyelitis appear to justify further comment on this simple therapeutic program, particularly since three of our large military hospitals have recently reported a series of cases in which the topical principle of therapy has been neglected in favor of more radical methods.

Never in all history have we been confronted with mutilation of the magnitude now seen, not only here but throughout the world. An enormous number of these tragic casualties are suffering from chronic osteomyelitis and face a hopeless future of invalidism. To date all known methods of surgical treatment have often been inadequate and amputation must be performed in some cases. Confronted by this fact, it is imperative that the surgeon reexamine the status of accepted practices used in treating the disease.

The medical profession is at present represented by two opposing points of view concerning the basic course to be followed in dealing with the patient with chronic osteomyelitis: One group may be described as the exponent of radical surgery and represents the majority trend in military medicine. Essentially the method advocated consists in extensive saucerization of the affected region, with an attempt to remove mechanically

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1. Grace, E. J., and Bryson, Vernon, Topical Use of Concentrated Penicillin in Surface-Active Solution, Arch. Surg. **50:** 219 (April) 1945.

all possible infective foci. Skin grafting may be employed and becomes almost a necessity when the excision of bone and muscle has resulted in a wide area of exposure.[2] The resultant cosmetic effect, even when there is no impairment of function, should hardly receive the unqualified endorsement of individuals on whom such operations are performed. Yet to the surgeon the arrest of osteomyelitis may be regarded as evidence of success, regardless of prolonged hospitalization and possible mutilation attendant on the method.

According to another point of view, as held by us and a minority of others, primary reliance in treating chronic osteomyelitis should be placed on chemotherapy, with surgical intervention reduced to a minimum compatible with successful treatment. The word of Anderson and his associates[3] supports the contention that a favorable outcome may usually be anticipated when a program of penicillin therapy is combined with conservative surgery. Our own studies with penicillin-detergent combinations are designed to eliminate, by means of the detergent, the isolation of penicillin-susceptible bacteria in sequestrums, sclerosed bone, abscesses, poorly vascularized sinus tracts and soft tissue scars. It then becomes possible to eliminate concurrently the bacteria themselves, utilizing the antibacterial properties of penicillin as enhanced by the presence of the detergent. Experiments now in progress show that the familiar stimulation of the bacterial properties of antiseptics in the presence of detergents[4] is also noted in combinations of penicillin with the wetting agents that we have used. A report of this work will be published elsewhere.

No complete judgment of the efficacy of penicillin-detergent combinations can be made until time has elapsed and the percentage of recurrent infections is tabulated. Yet one must remember that surgery alone is too often merely palliative and the spectacle of a patient with a history of from forty to fifty operations is not unusual. Therefore it would seem that the use of chemotherapy, a conservative and nonmutilating treatment, should be made the method of first choice in treating our war wounded, even though in some cases it may not prove to be ultimately successful. Where failures or relapses occur there is still time enough for the prolonged hospitalization and possible disfigurement attendant on saucerization and the inevitable removal of some healthy tissue. In the meantime our limited experience suggests that the employment of penicillin with a wetting agent is well suited for the nonoperative treatment of chronic osteomyelitis and deserves wider attention when considered in conjunction with the inadequacies of accepted surgical practice.

THERAPEUTIC PROGRAM IN CASE REPORTS

Unless noted, the plan of therapy in all of these cases has been essentially the same: First, a complete physical examination with correction of obvious deficiencies such as anemia and focal infection. The latter we feel is vital and no therapy is undertaken until all dental sepsis, such as devitalized teeth or apical infection, has been removed; all cavities must likewise be filled. Tonsils are removed in every case in which they appear infected clinically or if this is advised by the otolaryngologist. In the male, infection of the prostate is often a factor, and in some of our more advanced cases of osteomyelitis we have encountered previously unrecognized cases of prostatic infection.

After these preliminary steps have been carried out the patient is hospitalized for ten days and during this period he receives penicillin as follows: Injections of approximately 3 cc. (more or less depending on the size of the sinus) of a solution made up of 200,000 units of penicillin dissolved in 25 cc. of a wetting agent (Aerosol O. T. or sodium tetradecyl sulfate 0.1 per cent) into each sinus every three hours. Appropriate needles must be used to follow the sinus tract to the infected area of bone and an effort must be made to flood the solution into the diseased area. This is supplemented by intramuscular injections of 20,000 units every three hours for the first four doses and then 10,000 units every three hours. The medication is continued regularly night and day throughout the period of hospitalization.

In some cases now under treatment we have increased the topical application to 20,000 units per cubic centimeter or 1 million units per 50 cc. We do not allow more than 25 or 50 cc. of the penicillin and wetting agent to be prepared at a time in order to insure a fresh solution and prevent deterioration of the penicillin.

REPORT OF CASES

In an earlier publication[1] we reported a case in which chronic osteomyelitis with a chronic purulent discharge had been present for nine years. The discharge has not reappeared since treatment with penicillin and the detergent. This now represents an eleven month follow-up.

CASE 1.—A man aged 39, a delivery man, first seen at the Grace Clinic on July 24, 1945; presented the complaint of chronic osteomyelitis. In 1921 he had been injured in a basketball game and had developed osteomyelitis of the left tibia. After one year this cleared up and remained so until 1938, when he had a recurrence which lasted for five months. It broke down again in 1941 and he was ill for three months. Since this time he has had recurrent breakdowns of the wound at intervals of about three months. He has had seven surgical procedures performed on this leg to date. There have been no other complaints.

The skin over the left tibia was red and inflamed, with dense scar tissue from previous surgical operations. There was a sinus at the upper end of the left lower leg extending to the bone. The inguinal and femoral glands on the left were enlarged, grade 3 (on the basis of 4). The prostate was normal.

X-ray examination of the left tibia, July 24, 1945, showed chronic osteomyelitis of the shaft. Dental x-rays disclosed the mouth to be negative for periapical foci. There was grade 2 alveolar resorption in the upper left first molar area with pyorrhea pockets as well as grade 1 alveolar resorption about the lower anteriors. There was extensive caries in the upper right cuspid. A culture of material from the sinus in the left leg revealed the presence of hemolytic Staphylococcus aureus predominating.

The patient was referred to his dentist for treatment and then admitted to the hospital, Aug. 8, 1945 for penicillin therapy. A culture was taken from the sinus on August 18 and was sterile at the end of twenty-four and ninety-six hours. After a twelve day period of hospitalization he was discharged and the sinus appeared to be entirely healed. A protective dressing was applied and one week later, August 27, he was allowed to resume his normal activities. He was last seen by us on Oct. 9, 1945 and there had been no evidence of recurrence.

CASE 2.—A man aged 37 with chronic osteomyelitis of both arms and legs was first known to us on June 4, 1945. Following an injury to his right knee in 1941 he had developed osteo-

2. Kelly, R. P.; Rosati, L. M., and Murray, R. A.: Traumatic Osteomyelitis: The Use of Skin Grafts—Part I, Ann. Surg. **122**: 1 (July) 1945.

3. Anderson, D. G.; Howard, L. G., and Rammelkamp, C. H.: Penicillin in the Treatment of Chronic Osteomyelitis, Arch. Surg. **49**: 245 (Oct.) 1944.

4. Petroff, S. A., and Schain, P.: The Enhancement of Bactericidal Properties of Well Known Antiseptics by Means of Detergents, Quart. Bull. Sea View Hosp. **5**: 372 (July) 1946.

myelitis in the right tibia, the left femur and fibula and the humeri. He had been hospitalized on numerous occasions and had undergone a total of forty-seven surgical procedures for this condition. (This represents the greatest number of operations for any patient in this series.)

Examination revealed a foul, irregular, ulcerating area of exposed bone, approximately 2 by 4 cm., over the anterior surface of the right tibia. Pus was draining freely from a sinus on the left thigh. There was moderate tenderness of the right shoulder, and the patient stated that in the past such tenderness had invariably indicated a breakdown.

X ray examinations on June 5 revealed chronic osteomyelitis of the lower half of the posterior and mesial surfaces of the right tibia, chronic osteomyelitis of the lower half of the left fibula, chronic osteitis and osteomyelitis in the midportion of the left femur with some apparent activity on the anterior surface, chronic osteitis involving the shaft of the left humerus and early periostitis and medullary widening of the middle third of the shaft of the right humerus probably indicative of early activity. Dental x-rays showed no periapical foci. There were periodontal lesions, grades 2 to 4, with alveolar resorption and caries. Cultures taken from each leg on June 7 showed Staphylococcus aureus, moderately hemolytic and moderately pigmented.

The patient was hospitalized for penicillin therapy on June 17, after the dental sepsis had been eliminated. When he was discharged on July 6 each sinus was 95 per cent closed and the discharge decreased in like proportion. Wet tyrothricin dressings with compression bandages were applied to the wound on the left thigh, and the thin, watery discharge gradually dried up altogether. The area of exposed bone on the lower part of the right leg was treated in the same way, and this healed promptly. It has remained covered and dry since. A culture of the thin discharge from the left femur, taken August 3, revealed a very scant growth of Staphylococcus albus, one colony being slightly hemolytic. On August 9 additional material was obtained for culture by injecting a needle deeply into the sinus, which was apparently healed and a direct smear was negative. Cultures of September 11 were reported as negative after seventy-two hours.

In this, as well as in other similar cases with long sinuses extending from the skin to the bone, we attribute the slowness in healing to fibrosis between the skin and the bone. They respond well to wet tyrothricin dressings and compression bandages.

CASE 3.—A man aged 32, a dental laboratory technician, first seen by us June 22, 1945, fell in 1925, injuring his right hip. A few days later he developed scarlet fever and two weeks later the right hip became stiff. He was then hospitalized and treated with traction and casts for a period of eight months. He left the hospital with a deformity of the right hip and has had recurrent bouts of pain and fever since. In 1930 he had an operation to correct the deformity, and this procedure was followed by more traction and casts. The wound drained for a few months, then healed and remained closed for three years. Since then (1933) however there has been intermittent drainage. An osteotomy was done in 1942.

Examination revealed an old operative scar 20 cm. in length over the right hip. In the upper portion of this scar, directly over the greater trocanter of the right femur, there was a deep, draining sinus 5 cm. in length which could easily be probed to the bone. There was a slight discharge from the left ear, which the patient stated he had had since the age of 10 years. The tonsils appeared to be infected, grade 2, but there was no history of tonsillar sepsis. The prostate was slightly indurated and irregular.

X-ray examination of the right hip June 28 demonstrated complete fusion of the hip joint, probably the result of old osteomyelitis. The dental x-rays disclosed alveolar resorption and periodontal foci, grades 2 to 3, and caries, grade 4. A prostatic smear revealed a few white blood cells with no clumps. Culture of the material from the draining sinus, taken before therapy was instituted, showed hemolytic Staphylococcus aureus with golden pigmentation and good hemolysis at forty-eight hours.

The dental work was attended to and the patient was hospitalized on August 20. He received 8,000 units of calcium penicillin to 1 cc. of the Aerosol O. T. 0.1 per cent in the topical application. Cultures taken eight and ten days respectively after treatment started remained sterile at ninety-six hours. When he left the hospital, September 2, the sinus tract was healed and dry and has remained so. He was last seen on Oct. 5, 1945. It is interesting to note that he no longer complains of discomfort in the affected area during damp weather.

CASE 4.—A schoolgirl aged 17 years, who had osteomyelitis of the left hip for eleven years, was first examined at the clinic on June 11, 1945. She presented a history of severe mastoiditis at the age of 6 years on the right side, which required mastoidectomy, and immediately after operation she developed pain in the left hip. In the eleven years since this episode she had undergone twelve surgical operations and there had been a persistent draining sinus which closed intermittently. At one period it remained closed for seventeen months. However, for the past seven months there had been constant drainage.

Examination revealed scars on the left groin and the outer surface of the left hip. There was a draining sinus in the upper third of the anterolateral surface of the left thigh. The pelvis was rotated, with a spinal curvature compensating for 1¼ inch shortening of the left leg. The left thigh was smaller, grade 2, than the right, and the left inguinal glands were enlarged, also grade 2. Except for dental sepsis, examination was otherwise negative.

The dental x-rays showed a retained root fragment and one crowned tooth of questionable vitality; there was interproximal caries, grades 1 and 2. X-ray examination of the left hip demonstrated complete destruction of the joint, including the head and neck of the femur. There was solid bony ankylosis of the upper shaft and acetabulum. A culture of material from the sinus taken on the date of her first visit revealed Staphylococcus aureus, slightly pigmented and moderately hemolytic, and Streptococcus pyogenes.

The patient was given liver, vitamin B and iron therapy to correct a mild anemia (hemoglobin 11.7 Gm. per hundred cubic centimeters, or 78 per cent) and referred to her dentist for elimination of the dental sepsis. The dental work completed, she was hospitalized on August 30 and received the usual therapy except that 8,000 units of calcium penicillin was used to 1 cc. of the wetting agent for the local application. In order to increase the efficacy of the penicillin an opening about 3 cm. was made at the upper end of the sinus tract in the left thigh about 18 cm. from the lower end of the tract to enable the solution to enter the infected area more directly.

Culture of material from each sinus taken two days before discharge from the hospital revealed Escherichia coli, a few staphylococci, no hemolysis and no pigment. When she left the hospital on Sept. 15, 1945 the sinuses were closed, although the upper one was slightly inflamed. Wet tyrothricin dressings with compression were applied to this area, which cleared up within five days.

CASE 5.—A bedridden man aged 70 was referred to our care and hospitalized on Aug. 26, 1945 for penicillin treatment of chronic osteomyelitis. In February 1934 he had developed pneumonia with subsequent persistent low grade fever. The right hip became inflamed, and incision and drainage were done. The right hip continued to drain, and in 1935 he was again hospitalized and operation was carried out. There were apparently multiple sinuses in the area of the upper part of the right leg, and the drainage continued to be almost constant. He had failed to respond to sulfonamide treatment.

X-ray of the pelvis and the right hip on August 27 disclosed the left half of the pelvis intact. The left hip joint showed no pathologic condition. The sacroiliac joints were not abnormal. The right femoral head and neck showed considerable decrease in size. The acetabulum was fairly well developed but high in position. The head and the femoral neck, although decreased in size, showed smooth borders. There was moderate increase in density in the ilium and ischium, in the acetabular region and also in the wing of the ilium. There were suggestive areas of bone destruction, particularly in the lateral region. The superior border of the acetabulum showed some hyper-

trophic changes. There was moderate soft parts swelling about the hip region. Moderate arterial calcification was present. A culture taken from a sinus on August 28 revealed gram negative bacilli, coli group; also diphtheroids. This patient also received 8,000 units of the calcium penicillin to 1 cc. of the wetting agent for the topical application. Another culture taken on September 13 was sterile at twenty-four and ninety-six hours. The patient was discharged on September 13 and the sinuses have remained dry since.

The bacteriologic findings show that the organisms present here were penicillin resistant and therefore, on the basis of these findings alone, penicillin therapy would not have been indicated. The clinical effects obtained may have been due to the interaction of the penicillin and the detergent on the bacterial cell.

CASE 6.—A woman aged 27, a secretary, first seen by us on June 19, 1945, developed acute osteomyelitis of the left tibia following an injury at the age of 8 years and had suffered a draining sinus in this area since. During this interval she had undergone nineteen surgical operations. The patient was obese and stated that she had frequent sore throats. Her general condition was otherwise satisfactory.

Examination revealed operative scars over the entire length of the anterior tibia on the left leg with two sinuses, one about 1 mm. and the second about 2 by 1.5 cm. in diameter, about 5 cm. below the patella on the inner aspect. There was an area of ulceration about the sinuses. There was evidence of tonsillar and dental sepsis.

X-ray examination of the left tibia on June 20 showed chronic osteomyelitis at the upper half. Dental x-rays confirmed the presence of grade 4 (basis 4) caries. A culture taken on June 20 of material from the sinus revealed a heavy growth of beta hemolytic streptococci and some Pseudomonas pyocyanea organisms.

The patient was referred to her dentist, tonsillectomy was also done and on August 26 she was hospitalized for penicillin therapy. After a ten day course she left the hospital with a slight discharge from a pinhole opening about the old sinus area. The ulcerated area about the sinuses cleared up with application of chlorophyll ointment and is now (Oct. 29, 1945) entirely dry.

CASE 7.—A man aged 40, a sales manager, first seen by us on April 2, 1945, presented the complaint of intermittent discharge from a sinus on his right hip. In 1921 he fell and injured his right hip. One year later he had severe pain in the lower part of the left leg with fever. A diagnosis of osteomyelitis of the left tibia was made. He was hospitalized and operated on at that time; one year later the bone was curetted. The wound drained for eight months and then healed and remained so until 1941, when he was again hospitalized for surgery. Since then the wound had not remained closed for longer than six weeks at any one time.

Examination revealed a scar running the entire length of the left tibia with a draining sinus at the distal portion and another scar over the right hip. There was evidence of dental and tonsillar sepsis; the prostate was symmetrical and slightly indurated.

X-ray examination of the lower part of the left leg on April 3, 1945 showed chronic osteomyelitis and osteitis involving the entire shaft of the left tibia. Dental x-rays revealed the presence of four devitalized teeth with root canal fillings and large radiolucent areas at the apexes. There were chronic alveolar abscesses and periapical infection, grade 4. Prostatic smear demonstrated from 5 to 8 white blood cells per high power field, with no clumps. Culture of material from the sinus taken on April 3 gave an abundant growth of hemolytic staphylococci.

The dental sepsis was eliminated and the patient hospitalized on May 22, 1945. Therapy was completed and he was discharged on June 2, 1945 with the sinus completely healed and dry. Another culture taken June 1, 1945 remained sterile at one week.

The patient was last seen on Oct. 22, 1945. He reported that a few days earlier he had noted a slight watery discharge in the region of the old sinus. Examination showed that this was not in any way associated with the old bone condition. Tyrothricin ointment was applied, and this superficial skin ulceration cleared up promptly.

SUMMARY AND CONCLUSIONS

1. Of 7 cases of chronic osteomyelitis involving the extremities, in 3 the hip was affected with either complete ankylosis or limitation of movement. Individual treatment consisted of hospitalization for a period of from ten days to three weeks with intramuscular penicillin (we have used both the sodium and the calcium salt) varying from 10,000 to 20,000 units every three hours. In some cases from 20,000 to 50,000 units were used for the first four doses. Simultaneously from 4,000 to 20,000 units of penicillin per cubic centimeter was applied locally into the sinus tract with 1:1,000 Aerosol O. T. (dioctyl ester of sodium sulfosuccinate) or Tergitol 4 (sodium tetradecyl sulfate) in isotonic solution of sodium chloride. The local application of penicillin to the site of infection was made at regular three hour intervals with quantities of solution up to 4 cc. retained in each sinus cavity either by drainage or with a compression bandage. The drainage method was accomplished by placing the patient in such a position that the sinus, from its cutaneous opening, would be uppermost, thereby allowing the solution of penicillin and wetting agent to seep down by gravity to the area of infected bone. When this was not possible, petrolatum gauze dressings were placed over the sinus after the solution had been injected.

2. We have had one definite failure and in a subsequent publication will present data emphasizing the importance of tracing the location of the sinus opening to the bone with contrast mediums and securing, with minimal surgical intervention, an opening in the sinus directly over this, enabling the optimum amount of solution to reach the infected bone. The simplicity of this principle is demonstrated in case 4, in which the draining sinus was 30 cm. from the infected bone. Prompt results were obtained as soon as the upper portion of this sinus, nearest the primary infection, received adequate penicillin.

3. Considered cosmetically, the nonoperative method of treating chronic osteomyelitis appears preferable to the older technic of saucerization or sequestrectomy, with its attendant mutilation and prolonged hospitalization. In this series alone there had been a total of ninety-one previous operations without any clinical cure.

4. The removal of all sources of focal infection preparatory to treating patients with penicillin-detergent is believed to be of vital importance.

5. Among war casualties, the high morbidity associated with osteomyelitis of the extremities may be substantially reduced if the effectiveness of nonoperative treatment is borne out by wider clinical experience.

Expectation of Life.—It has been estimated that the average expectation of life, at birth, in 1800 was 35 years, and the average woman of childbearing age had eight children born to her. By 1944 these ratios had changed to a life expectancy at birth of approximately 65 years. By 1944 also the average woman who had passed the childbearing age had had 2.2 children instead of 8. The crude death rate during the same period, 1830 to 1940, dropped from 25 (estimated) to the vicinity of 10, and the birth rate from an approximate 55 in 1880 to 20 in 1944.—Smillie, Wilson G.: Preventive Medicine and Public Health, New York, Macmillan Company, 1946.

SURGICAL TREATMENT OF SPONTANEOUS NONTRAUMATIC HEMATOMAS

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The symptomatology of massive intracerebral hemorrhage caused by hypertension is well known. The hopeless outcome in this condition following medical treatment prompted Cushing [1] in 1903 to report surgical therapy in 2 cases. He stated: "In spite of the unfavorable result following operation in both cases, the temporary amelioration of the severe symptoms is a sufficient justification for future attempts to afford surgical relief to certain carefully selected cases of intracerebral hemorrhage."

Since Cushing's article there have been many reports of successful removal of traumatic and spontaneous intracerebral hematomas from the cerebrum and cerebellum.

This paper is limited to spontaneous, nontraumatic hematomas of the left temporal lobe, since these lesions produce a clear, easily recognized clinical syndrome and are amenable, because of their location, to successful evacuation by trephine or craniotomy.

Russell and Sargent,[2] Bagley,[3] Penfield,[4] Craig and Adson,[5] Furlow, Carr and Wattenberg,[6] Pilcher [7] and Rowbotham and Ogilvie [8] have all reported successful results following evacuation of clots in this lobe as well as other cerebral areas. I present the following 3 cases:

CASE 1.—L. D., a white man aged 53, referred by Dr. S. W. Eisenberg to the neurologic service of Dr. Sherman F. Gilpin Jr., Temple University Hospital, on Feb. 20, 1944, had an attack of weakness and vomiting two days before admission to the hospital. His wife stated that he "talked funny" and that his speech was difficult to understand. He became irritable and progressively drowsy and was hospitalized.

There was no history of head trauma. The patient had complained of headaches for almost a year and had often vomited in the morning. One month before the present attack he had "influenza" and was told that his blood pressure was "210." The family history was not obtained.

The temperature was 98.4 F., pulse rate 70, respiratory rate 18 and blood pressure 206/96. The patient was drowsy but easily aroused, when he showed a mixed aphasia with jargon speech. Tests for nuchal rigidity were not made. The pupils were equal and reacted sluggishly to light. The eyegrounds showed no choke or hemorrhages. There was a grade 1 sclerosis. A right homonymous hemianopsia was present with macular preservation (Dr. Hosner). The patellar reflex was increased on the right and a Babinski sign was present on this side. A weakness of the lower part of the face was also present on the right. There was no impairment of sensation (corroborated on later examination). The patient was right handed.

The red blood cell count showed 16 Gm. of hemoglobin and 5,630,000 red cells. The white blood cell count was 14,800, with 64 per cent polymorphonuclears, 26 per cent lymphocytes and 3 per cent eosinophils. The urinalysis was not abnormal. The blood Wassermann and Kahn reactions were negative. The sedimentation rate was 18 mm. in one hour. Spinal puncture showed a pressure of 130 mm. of water. The fluid was clear and contained 9 white cells. The protein was 66 mg. per hundred cubic centimeters. The spinal fluid Wassermann reaction was plus, minus, doubtful. The colloidal gold curve was 0023311000.

Another spinal puncture nine days later showed a pressure of 100 mm. of water. The fluid was now xanthochromic and contained only 1 white cell. The protein had increased to 77 mg. per hundred cubic centimeters. The Kolmer Wassermann reaction was negative and the colloidal gold curve 0122210000.

X-ray of the skull showed a shift of the pineal gland 6 mm. to the right and slight erosion of the internal table of the skull in the parietal area (fig. 1). X-ray of the chest was negative (Dr. S. S. Peoples).

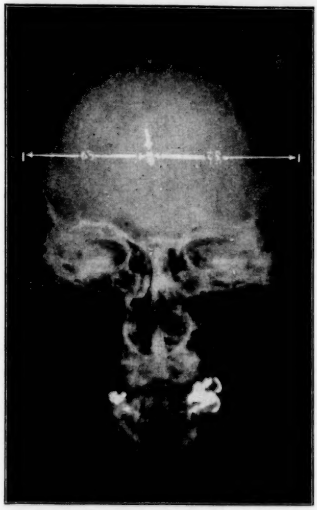

Fig. 1 (case 1).—Note the shift of the pineal gland 6 mm. to the right of the midline, indicating a space-taking lesion in the left cerebrum.

A diagnosis was made of a space-taking lesion in the left temporoparietal lobe, and the patient was transferred to the neurosurgical service. Before operation the patient was conscious and cooperative but still showed the neurologic changes reported on admission. On March 17 a left osteoplastic flap was reflected under solution of tribromoethanol local procaine and pentothal anesthesia. The x-ray report of an erosion of the inner table of the skull proved to be an area of increased vascularity of the inner table not directly over the lesion in the temporal lobe. The gyri over the posterior temporal lobe were pale and widened, the cortex in the posterior superior portion of the lobe was bluish and brownish (figs. 2 and 3). Palpation of this area revealed softening and fluctuation. A cannula was inserted and encountered black, tarry liquid blood at a depth of 1.5 cm. The cortex was incised and a large black hematoma, the consistency of cranberry jelly and the size of an orange, was removed. The remaining cavity appeared to fill the entire posterior half of the temporal lobe and to extend upward and posteriorly, slightly into the parietal and

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occipital lobes. What appeared to be a membrane in the floor of the cavity was incised, and it was realized that the ventricle had been entered. There was no free bleeding from this cavity. The dura was closed and the bone flap replaced.

The histologic report was that the specimen presented no evidence of tumor, being composed of blood clots.

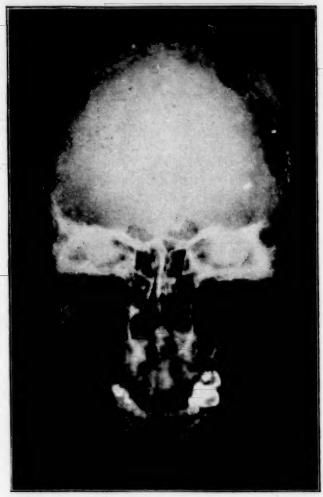

Fig. 2 (case 1).—Postoperative appearance. Silver clips outline softened cortex in the left temporal lobe immediately above the hematoma.

The patient convalesced well and was walking about at the time of discharge on March 29. There was still a mixed aphasia present and a complete right homonymous hemianopsia.

The patient was examined in January 1945, approximately eleven months after onset and ten months after operation. He had no headaches, the aphasia had improved considerably and was evident only when the patient was excited or nervous, and the right homonymous cut was still present. The blood pressure was 190/110.

Case 2.—E. W., a Negro woman aged 40, admitted to the neurologic service of Dr. A. S. Tornay at the Philadelphia General Hospital on Aug. 4, 1944, while working in a laundry was seized with a sudden, severe pain in the left side of her head. Within the next twenty-four hours weakness of the right arm and leg developed and the patient was admitted to the hospital.

There was no history of head trauma. The patient had been complaining of headaches, which were gradually getting worse. The family history was negative for any cerebral accidents.

On admission the temperature was 100 F., pulse rate 64, respiratory rate 18 and blood pressure 140/80. The patient was drowsy but could be aroused and was cooperative. Anomia and jargon speech were present. There was no nuchal rigidity. Examination of the eygrounds showed no choke and no vascular lesions. There was pronounced weakness of the entire right side of the body. The patient was right handed. The complete blood count and urinalysis were not abnormal. The urea nitrogen was 16 mg. per hundred cubic centimeters, the blood sugar 112 mg. per hundred cubic centimeters. The blood Wassermann reaction was negative on two occasions. X-ray of the skull was negative. The pineal gland was not calcified. X-ray of the chest was negative. An electrocardiogram was negative.

Seventeen days after onset, the patient showed a gradual improvement in speech and motor power. Twenty-five days after onset, routine examination of the eyegrounds showed a choked disk of 2 diopters. The following day a spinal puncture showed xanthochromic fluid under a pressure of 380 mm. of water. Recheck examination twenty-six days after onset showed the presence of sensory mixed aphasia, weakness of the entire right side of the body and no impairment to pain, temperature, touch or vibration sense. Position sense was present in the legs and difficult to test for in the right upper extremity. The deep tendon reflexes were active on both sides. A Hoffman sign was present on the right. Babinski's sign was absent.

Recheck spinal puncture twenty-seven days after onset showed a pressure of 350 mm. of water. The spinal fluid showed 8 cells; protein was 50 mg. per hundred cubic centimeters. The serologic and colloidal gold tests were not reported.

Recheck eye examination thirty days after onset showed no cooperation to visual field test. There was 2 diopters of choked disk in both eyes. A few small hemorrhages were present on the disk. There were none in the periphery of the retina. The arteries were small and sclerotic (Dr. J. C. Siggins).

The patient's headaches became severe again forty days after onset and surgical intervention was requested.

A preoperative diagnosis was made of hematoma or abscess of the left temporal lobe, and a left exploratory craniotomy was done on September 20, approximately seven weeks after onset of symptoms. The blood pressure before operation was 142/80.

The gyri of the left temporal lobe were wider than usual, and the cortex in the posterior superior portion was yellowish brown. A cannula was inserted in this area and black, tarry liquid blood was aspirated. The cortex was incised and a solid hematoma the size of a small apple removed. There was evidence of recent and old bleeding. A biopsy was also taken of material from the floor of the cavity. A small portion of choroid plexus of the lateral ventricle protruded into the depth of the cavity. It was not bleeding, and there was no flow of any ventricular fluid. I could not determine whether the wall of the ventricle had been perforated at operation or the clot had broken into the ventricle. The cortical rim of the cavity was marked with silver clips, and a clip was placed into the deepest portion of the wall (figs. 4 and 5). The biopsy

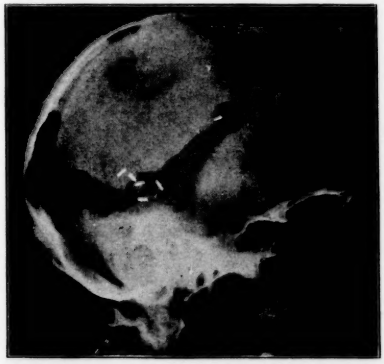

Fig. 3 (case 1).—Lateral view.

was reported by Dr. Helena E. Riggs as organizing hematoma. There were no tumor cells.

The patient improved rapidly following operation and on the eighth day she was sitting up and jargon speech had disappeared.

Eighteen days later the patient complained of recurring headaches. Spinal tap showed clear fluid under 100 mg. of water pressure. The blood pressure was 130/75. The patient was placed on restricted fluids and hypertonic enemas, and headaches decreased.

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The patient left the hospital twenty-one days after operation. The jargon speech had disappeared, but she still complained of headache at times. No follow-up could be secured.

CASE 3.—H. S., a white man aged 37, was admitted to the medical service of Dr. Mitchell Bernstein at the Jewish Hospital on Sept. 9, 1944. The patient's wife stated that he had been drowsy and, at times, irrational for twelve hours prior to admission.

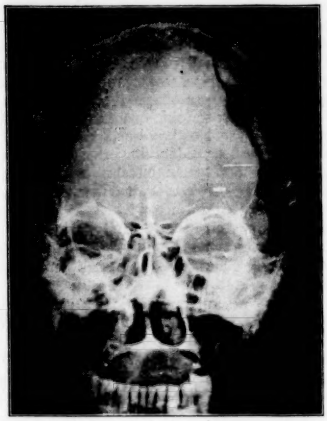

Fig. 4 (case 2).—Postoperative appearance. Maximum point of lesion, presenting on the cortex of the left temporal lobe, outlined by silver clips. Compare this area with figures 2, 6 and 7. Silver clip in floor of cavity shows mesial extension of hematoma.

Fourteen days before admission the patient had complained of constant pain over the left eye and was treated for a frontal sinusitis. No elevation of temperature was present at that time. This pain decreased and the patient was comfortable until the day preceding admission, when during intercourse he suddenly developed a severe pain over the left eye and speech became thick and unintelligible. He rapidly became irrational and drowsy and was admitted to the hospital approximately twelve hours after the onset of the acute head pain. The past history was negative for any serious illness or previous severe headaches. There was no history of head trauma.

The blood pressure on admission was 130/80, the pulse rate 48, the respiratory rate 18 and the axillary temperature 96 F. The patient was very drowsy. He responded to a few commands but did not answer any questions. Slight nuchal rigidity was present. His face was plethoric and there was slight cyanosis of the lips and nails. The right pupil was larger than the left, and there was ptosis of the left upper lid. The Babinski sign was present bilaterally. A provisional diagnosis was made of spontaneous subarachnoid hemorrhage or meningitis. The patient was right handed.

A spinal puncture showed an initial pressure of 300 mm. of water. The fluid was homogeneously pink. There were 1,500 red cells and 10 white cells. The total protein was 100 mg. per hundred cubic centimeters. The spinal fluid Wassermann reaction was negative and culture was sterile. The blood Wassermann test taken on the day of admission was negative. The hemoglobin on two occasions was 15.4 and 14.7 Gm. and the total red blood cells numbered 5,400,000 and 5,210,000. The white blood cell count on admission was 13,000, with 96 per cent polymorphonuclears, 2 per cent lymphocytes and 2 per cent monocytes; the following day it was 14,900, with 72 per cent polymorphonuclears, 25 per cent lymphocytes and 3 per cent monocytes. The blood sugar on two occasions was 110 and 100 mg. The blood urea nitrogen was 11 mg. and 10.5 mg. The carbon dioxide combining power was 44. The sedimentation rate was a diagonal curve, 17 mm. in one hour. Cultures of the nasopharynx showed Bacillus subtilis, Streptococcus viridans and hemolytic Staphylococcus albus. Blood culture was reported negative. The bleeding time was three and one-half minutes, the coagulation time two and one-half minutes and the prothrombin time 30 per cent of the normal control. The vitamin C blood level was 2.0 mg. per hundred cubic centimeters. The purified protein derivative number was subsequently reported as negative.

Nose and throat examination by Dr. Sacks Bricker suggested chronic ethmoiditis but no evidence of acute suppuration in the frontal sinus.

Neurosurgical examination the day after admission revealed a drowsy patient who could be aroused. A mixed aphasia with jargon speech was present. There was nuchal rigidity. There was a ptosis of the left upper lid. The patient winced when the left temporal area was pressed on or percussed. The eyegrounds showed no choke, hemorrhage or exudate. There was no cooperation to the field test. There was weakness of the right lower third of the face and pronounced weakness of the right arm and leg. A Babinski sign was present on the right. The patient winced when pinched in either leg, but there was no cooperation to sensory tests. These symptoms suggested a rapidly expanding lesion into the left temporal lobe, probably a hematoma. An aneurysm of the left circle of Willis, as well as brain abscess, was considered. A stereoscopic x-ray for pineal shift was requested. The patient was placed on 24 ounces (720 cc.) of total fluids in twenty-four hours. He was given 50 cc. of 50 per cent sucrose intravenously every two hours for three doses and a hypertonic magnesium sulfate enema every eight hours; vitamin C 100 mg. (subcutaneously) and vitamin K 8 mg. (subcutaneously) were given daily.

The patient was seen by the attending neurologist, who felt that he had a lesion in the left temporal lobe and that a cerebritis with a brain abscess must be ruled out.

The cardiac and general medical examinations were entirely negative. The electrocardiogram was negative. X-rays of the sinuses and chest were negative. The heart was slightly enlarged

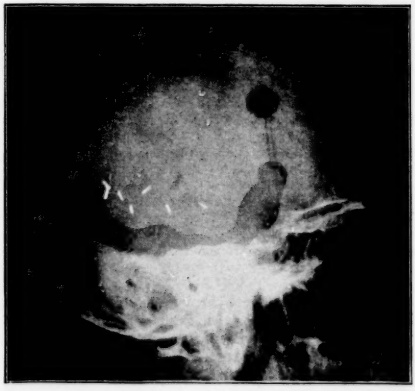

Fig. 5 (case 2).—Lateral view.

X-rays of the skull on the third day after admission showed a shift of the pineal gland to the right of the midline (Dr. Leon Solis-Cohen).

Following the dehydration measures, the patient improved considerably by the sixth day after admission. Spinal puncture at this time showed a clear fluid under 110 mm. of water pressure. There were no red cells and only 4 white cells. During the next six days the headaches again became severe, the patient became drowsy, operation was decided on and the patient was transferred to the neurosurgical service.

A left exploratory craniotomy was done on September 22, approximately thirty days after the initial onset of left supraorbital headache and sixteen days after admission to the hospital. The gyri of the superior portion of the left temporal lobe were flattened. A cannula was inserted and liquid black, tarry blood aspirated. The cortex was incised and a large semisolid clot, about 6 cm. in diameter, was aspirated by suction. When the clot was removed, the thin transparent mesial wall of the ventricle was seen and a small portion of the choroid plexus herniated through into the clot cavity. No bleeding occurred from the choroid plexus. There was no gross evidence of tumor. The cortical rim of the cavity was outlined with silver clips, the dura closed and the flap replaced (figs. 6 and 7).

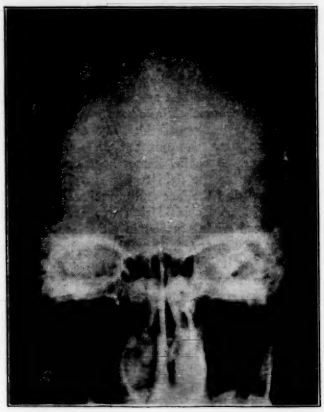

Fig. 6 (case 3).—Postoperative appearance, showing silver clips which outline maximum point of lesion in the cortex of the left temporal lobe. Note that this area is almost identical in all 3 cases.

Following the operation the patient's blood pressure ran between 170 and 120 systolic and 80 to 90 diastolic. The last five days before discharge it stayed at the 120/80 level.

The patient was fully well with no headache and slight jargon speech on discharge on October 18.

Recheck examination Jan. 2, 1945, approximately three and one-half months after operation, revealed that the patient had had no headache, speech was excellent, and there were occasional anomia and jargon speech when excited. A homonymous right inferior quadrant cut was present to the finger test. Muscle power was excellent. There was no impairment to pain, touch, warm or cool sensation, vibration, position sense or stereognosis. Blood pressure was 130/90.

COMMENT

The etiology of these hematomas is still obscure. Miliary aneurysm was suggested by Charcot and Bouchard in 1868; Von Monakow in 1905 believed that atheroma and hyaline degeneration should be considered. Ellis in 1909 stated that the lesion responsible was arteriosclerosis, beginning in the elastic layer, possibly involving all coats and resulting in aneurysm or simple rupture.[3] Pick in 1910, however, concluded "The importance of miliary aneurysms in the causation of hemorrhage has been exaggerated." Sachs,[9] however, believed that Pick's findings at least suggested some aneurysmal dilatation of the vessel wall as the cause for the hemorrhages.

Westphal believed that the actual hemorrhage was preceded by a period of ischemia, the result of angiospasm. During the period of spasm, the tissues surrounding the vessels were altered and after return of the blood into the vessels this tissue did not offer sufficient resistance to vessel wall and leakage occurred.[5] Against this theory might be cited the hundreds of attacks of homonymous hemianopsia that occur in certain migraine patients for years without a permanent field cut resulting.

Globus and Strauss believe that cerebral apoplexy is a final event and that it is preceded by softening.[4]

Marburg [10] made microscopic studies of cerebral hemorrhage in younger persons and concluded that these hemorrhages are due to toxic or toxic infectious changes in the walls of the blood vessels; that these changes remain latent for a considerable period of time but may lead to sudden increase in blood pressure and consequent hemorrhage through overexcitement or overwork or some other emotional factor.

A search for a clue as to etiology in 15 cases of intracerebral hematoma of the left temporal lobe (12 reported elsewhere and 3 cases reported herein) showed the following:

The blood Wassermann reactions were recorded in 7 cases and all were negative. Hypertension was present in approximately 40 per cent of the entire group. Pyogenic infection was not proved in any of the cases, although the white count and sedimentation rate were elevated at times. Trauma was carefully ruled out. Metabolic disturbances were not reported. Exogenous poisons were not reported, and little mention is made of the patient's occupation. Penfield reported a case in which the onset of symptoms came on after a 14 year old boy smoked his first pipe. He attributed the accident to the strain of vomiting rather than to the toxicity of the nicotine.

Congenital anomalies or aneurysms were not reported. These lesions could easily be missed during a brain operation, and only two autopsies were done in the entire group.

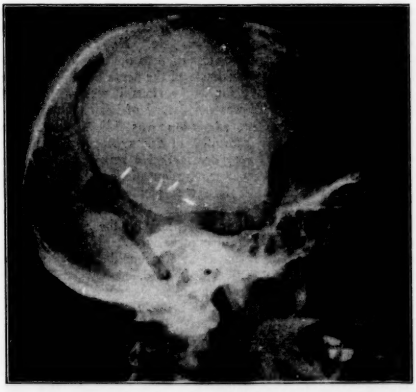

Fig. 7 (case 3).—Lateral view.

Brain tumor was not found as the primary cause in any of the cases. This is probably because such cases

9. Sachs, B.: Apoplexy, Bull. New York Acad. Med. **4**: 1250, 1928.

10. Marburg, O.: Difficulties of Differential Diagnosis of Hemorrhage in Young Persons with Appearance of Brain Tumors and Encephalitis, Deutsche Ztschr. f. Nervenh. **105**: 22, 1928.

would be reported as brain tumors complicated by or associated with hemorrhage rather than as spontaneous hematomas.

Blood dyscrasias were searched for in 1 case of my series and the only abnormality found was a prothrombin level of 30 to 37 per cent of normal and a slight increase in red cells and hemoglobin. This abnormality was not mentioned in the 12 cases reported by others.

Excitement or exertion appeared to be a precipitating factor in case 2, since severe sudden headache came on while the patient was working in a laundry and in case 3, when the sudden pain came on during sexual intercourse. Penfield, as stated previously, attributes the acute onset in a boy of 14 to severe vomiting following the smoking of his first pipe. Bagley reported a sudden onset in an overheated quarryman on a hot July day. Craig and Adson stressed strenuous exercise and severe emotional strain as possible precipitating factors in the nontraumatic cases.

Spontaneous intracerebral hematomas were most frequent between the ages of 30 and 50 (66⅔ per cent).

There were 8 males and 7 females, 13 white and 2 Negro. The symptoms and signs follow, in general, the pattern reported by Furlow and his associates.[6] The onset was sudden in 13 of the 15 cases. The presenting symptom in 10 was severe headache, usually frontal or occipital, at times on the side of the lesion and often associated with nausea and vomiting. The condition occasionally started with sudden unconsciousness or a convulsion. Some degree of aphasia, usually with anomia or jargon speech, was present in every case in which coma was not present. Nuchal rigidity was reported in 3 cases.

Irregularity of the pupils was reported in 3 cases, ptosis of the upper lid on the side of the lesion in 1. Ophthalmologic examination revealed hypertension or arteriosclerosis in 2 cases. Choked disk frequently occurred a few weeks after the onset. It was reported in 7 cases of the 15, slight in 5 cases (examined from the first day to the eighteenth day after the onset of the illness) and pronounced in 2 cases, 1 three weeks after the onset of illness and another six to eight weeks after onset.

A right homonymous hemianopsia was present in cases 1 and 3 of this series. Visual field examinations were reported in only 2 cases reported by others, and in 1 a right homonymous cut was found. The deep tendon reflexes were usually increased on the right and the Babinski sign was present on this side in 8 cases, and the Hoffman alone on the right in 2 cases.

Right sided paralysis to a varying degree came on within a few hours to a few days in 14 of the 15 cases (93 per cent). The face alone was involved in only 1 case. The arm and face were most involved in 2 cases.

Impairment of sensation was reported in only 2 cases of the entire series, and in these the parietal lobe was involved more than the temporal lobe.

The final fluid pressure was reported in 6 cases and found elevated in 4. The color of the fluid was recorded in 8 cases; it was clear in 1, blood tinged in 3 and xanthochromic in 4. The spinal fluid protein was increased in the 4 cases in which it was reported, regardless of the time of puncture from onset of illness. The protein varied from 50 to 100 mg., with an average of 72 mg. per hundred cubic centimeters of spinal fluid.

X-rays of the skull were done in all 3 cases of this series and the pineal gland was shifted to the right of the midline in 2 (cases 1 and 3). X-rays of the skull were reported in only 2 cases of the 12 taken from the literature. The pineal position was not mentioned. An encephalogram was unsuccessful in 1 case and a ventriculogram was diagnostic for a left sided lesion in another.

The time from onset of symptoms to operation varied considerably. The earliest period was three days and the latest nine months: 2 cases, first week; 7 cases, second to fourth week; 2 cases, fourth to fifth week; 3 cases, sixth to seventh week; 1 case, thirty-sixth week. From this it appears that early operation is not essential.

A left exploratory craniotomy was done in 13 cases and a trephine with aspiration in 2. The usual procedure was to tap the soft cortex, aspirate the liquid tarry blood, incise the cortex, remove the hematoma by suction and, as a precaution, take a biopsy of the hematoma and cavity wall as suggested by Furlow to rule out tumor. The site of the lesion in every case was the posterior superior portion of the left temporal lobe with some extension, at times, into the parietal and occipital lobes.[11] The gyri were often flattened and widened and soft to palpation. In 7 of 15 cases the cortex was stained a brownish yellow, a bile-tinged color (first reported by Penfield). The hematomas were all subcortical, often a few centimeters below the cortex and usually the size of a small orange. In over 50 per cent of the cases the cavity contained both tarry liquid blood and a larger amount of solid blood clot. A cyst wall was reported in only 1 case. The cavity in this case contained yellowish brown fluid and represented the end results of a hematoma, the operation being performed nine months after the sudden onset of a hemiplegia (Pilcher case 5).

Age of Onset

Age Group	Number of Cases
10-19 years	1
20-29 years	1
30-39 years	6
40-49 years	4
50-54 years	3

No evidence of tumor tissue was reported in any case. In the 3 cases in this series the thinned mesial walls of the lateral ventricle could be seen after the clot was removed. In 2 cases a tuft of the choroid plexus was found projecting through the wall into the cavity of the hematoma. This was probably an artefact produced by the suction. Penfield reported one clot as extending from the pia of the cortex to the wall of the ventricle, which was not entered but displaced.

11. Naffziger also called attention to this area as being the most common site, in his experience, for both the spontaneous and the traumatic hematomas (discussion of Craig and Adson[5]). No definite reason could be found for the selective location of the hemorrhage. It appeared to me that this area is a terminal zone for the subcortical branches of the middle cerebral artery. The area probably receives little supply, if any, from the posterior cerebral artery. It may be that at this point the blood supply is at a minimum of efficiency. Should a disease process occur, the possibility of softening with resultant rupture of a small arteriole, and the production of a hematoma, must be considered. There is also a diversity of opinion as to whether the hemorrhage is of arterial or venous origin. Craig and Adson[5] favored the venous origin, since they noted that, after the clots were evacuated and the cavity explored, no active bleeding could be found. On the other hand, Rowbotham and Ogilvie[10] have reported that after the removal of the intracerebral hematoma in 2 cases they found, in the wall of the cavity, a small adherent clot plugging the mouth of the arteriole that was ruptured. They give no histologic evidence as to whether the plugged vessel was an artery or a vein. W. B. Hamby (Gross Intracerebral Hematomas, New York State J. Med. **45**:866, 1945) recently reported 16 cases of intracerebral hematomas occurring in various lobes. One case was proved to be due to a ruptured aneurysm.

POSTOPERATIVE RESULTS

There were no fatalities in the 3 cases reported in this paper. The shortest follow-up in this series was of patient 2, twenty-one days, and she still complained of headaches at the time she left the hospital. Patient 1 was reexamined twelve months postoperatively. He works about his home. Jargon speech occurs at times when he is excited. A right homonymous cut is still present. Blood pressure was 190/110. Patient 3 was seen three and one-half months after operation, felt fine and had occasional jargon speech when excited. The homonymous cut had receded to an inferior homonymous quadrant cut. He had no motor or sensory disturbances. The blood pressure was 130/90. One month after this examination he had a generalized convulsion. Recheck examination six months after operation showed only a residual inferior right homonymous quadrantopsia. The patient felt well, he had no headaches or convulsions, his speech was excellent and he worked as a stock room clerk.

There were three fatalities in the 12 cases reported by various authors. Two of these patients were in coma when operated on and they had a blood pressure of 220/110 and 210/55. These were the highest blood pressures recorded in the entire series. One was operated on the fifth day after onset and the other the twenty-third day. In both cases autopsy showed a large clot still present in the temporal lobe with surrounding edema of the brain.

Of the 9 patients that survived operation, 5 showed various degrees of residual speech disturbances, 4 had some degree of paralysis and 1 had only a field cut. A residual visual field cut alone was present in 1 case (eight year follow-up) and some degree of hemiparesis alone was reported in 3 cases.

SUMMARY

Three cases of spontaneous hemorrhage into the left temporal lobe of right handed patients showed a group of symptoms falling into the following pattern:

1. Sudden onset with severe headache in 2 cases and an aphasia in the third.

2. Progressive drowsiness.

3. Focal symptoms of an expanding lesion in the left temporal lobe: (*a*) partial aphasia with anomia and jargon speech, (*b*) right homonymous hemianopsia, (*c*) increased deep tendon reflexes on the right, (*d*) Hoffman and Babinski signs on the right, (*e*) progressive weakness of the right side of the body, (*f*) no sensory disturbances, (*g*) shift of the pineal gland to the right.

4. The spinal fluid pressure was usually increased and the fluid was blood tinged, clear or xanthochromic. The total protein was increased above normal.

Following a left exploratory craniotomy, a subcortical hematoma was found in all 3 cases, in the left posterior superior temporal lobe. The clot was removed by suction, the dura closed and the bone flap replaced.

Recovery with improvement took place in all 3 cases.

A series of 12 similar cases reported by various authors fell into the same symptom pattern as the cases reported here.

No definite etiology could be found. Excitement and overexertion appeared to be precipitating factors.

Inadequate studies were made in most cases concerning exogenous toxins, blood dyscrasias, virus and other forms of infection.

CONCLUSIONS

1. Spontaneous, nontraumatic hemorrhage into the left temporal lobe produces a syndrome of an acute focal expanding intracranial lesion.

2. These cases are often erroneously diagnosed as "stroke" caused by cerebral arteriosclerosis or hypertension.

3. Any person, regardless of age, developing sudden headache associated with progressive focal signs such as aphasia, hemiplegia, anesthesias or visual field defects, vomiting and progressive drowsiness should be considered to have a space-taking lesion, possibly intracerebral hematoma. They should have the advantage of the following basic studies: (*a*) neurologic examination, (*b*) stereoscopic x-rays of the skull for pineal shift, (*c*) examination of the eyegrounds and perimetric fields and (*d*) careful spinal puncture for pressure, differential cell count, quantitative protein and Wassermann reaction.

4. Exploratory craniotomy with evacuation of the blood clot offers the best method of treatment in cases showing progression in signs and intracranial pressure.

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DESENSITIZATION TO INSECT BITES

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The return of servicemen from the far flung battlefronts of this global war has served to emphasize the problem of insect borne diseases. To date, most of the efforts of the sanitarian have been concentrated against the animal reservoirs of these diseases, and against the insect vectors of these diseases. Little has been reported on the immunity or resistance of the individual human host against the bites of insects.

Many laymen make the chance observation that at the beginning of the mosquito season they are bothered by mosquito bites. They then note that this becomes less troublesome as the season wears on. The same is true for flea bites.

The region surrounding the San Francisco Bay abounds in fleas. It is not surprising, therefore, to find references to experimental studies on the subject of immunity to flea bites emanating from this area. In 1939 Cherney, Wheeler and Reed [1] concluded that "if it is possible to induce 'immunity' against flea bites, it is probably likewise possible to 'immunize' against bites of other insects. If so, this would be an extremely valuable adjunct in the control of insect borne diseases." To prove their thesis that the selection of victims by fleas is not a matter of chance and that there is evidence of immunity to flea bites, these investigators actively immunized with flea antigen a group of 26 persons very susceptible to flea bites. The resultant immunity was demonstrated objectively in their series.

In 1941 McIvor and Cherney [2] described the technic of desensitization to flea bites. They used a polyvalent flea antigen prepared from whole fleas of the species Pulex irritans and Ctenocephalides canis. All patients

Miss Martha Eaton made the statistical analysis of data.

This investigation was supported by a grant from the Permanente Foundation.

From the Department of Pediatrics, Permanente Foundation Hospitals, Oakland and Richmond, Calif.

1. Cherney, L. S.; Wheeler, C. M., and Reed, A. C.: Flea Antigen in Prevention of Flea Bites, Am. J. Trop. Med. **19**: 327-332 (July) 1939.

2. McIvor, B. C., and Cherney, L. S.: Studies in Insect Bite Desensitization, Am. J. Trop. Med. **21**: 493-497 (May) 1941.

TABLE 1.—*Benefit from Flea Antigen*

Case No.	Name	Age	Sex	Race	Duration of Symptoms	Presence of Wheal	Irritation	Pruritus	Secondary Infection	No. of Injections	Results	Time	Comment
1	G. T.	3 yrs.	♀	W	..	—	+	+	—	4	Clear	2d	No bites after second injection
2	D. T.	2 mo.	♂	W	..	—	+	+	—	4	Clear	8d	
3	K. H.	5 yrs.	♂	W	..	—	+	+	—	5	Clear	10d	
4	D. H.	2 yrs.	♂	W	..	—	+	+	—	4	Clear	8d	
5	L. D.	2 yrs.	♀	W	..	—	+	+	—	4	Improved	8d	
6	K. C.	9 yrs.	♀	W	..	—	+	+	—	5	Clear	8d	Entirely clear after 4th injection
7	S. M.	3 yrs.	♂	W	..	—	+	+	—	4	Clear	8d	
8	C. B. S.	1½ yrs.	♀	W	..	—	+	+	—	4	Improved	8d	Benefited for 4 mos., then relapsed
8	C. B. S.	2 yrs.	♀	W	2 mos.	—	+	+	—	3	Improved	6d	
9	P. S.	8 mos.	♂	W	..	—	+	+	—	2	Clear	4d	
10	J. S.	2 yrs.	♂	W	..	—	+	+	—	2	Clear	4d	
11	S. S.	6½ yrs.	♀	W	..	—	+	+	—	2	Clear	4d	
12	R. L. T.	11½ yrs.	♂	W	..	—	+	+	—	5	Clear	10d	
13	C. W.	9 mos.	♀	W	..	—	+	+	—	3	Clear	6d	
14	J. H.	2½ yrs.	♀	W	..	—	+	+	—	4	Clear	8d	
15	F. W.	2½ yrs.	♂	W	..	—	+	+	—	1	Clear	2d	
16	M. S.	2½ yrs.	♂	W	..	Papules only	+	+	Impetigo	4	Clear	8d	
17	W. J.	5½ yrs.	♀	W	..	Papules only	+	+	—	4	Clearing	8d	Fleas still bite, but little reaction
17	W. J.	5½ yrs.	♀	W	2 mos.	Papules only	+	+	—	6	Clear	12d	Remained clear after this relapse
18	J. C.	7 yrs.	♀	W	..	—	+	+	—	5	Clear	10d	
19	P. O.	3 yrs.	♀	W	..	+	+	+	—	3	Clear	6d	
20	N. S. S.	2 yrs.	♀	W	..	+	+	+	—	4	Clear	8d	
21	R. McM.	3 yrs.	♂	W	..	+	+	+	—	3	Clear	6d	
22	L. C.	2 yrs.	♂	W	..	+	+	+	—	3	Clear	6d	Relapse after 4 months
22	L. C.	2½ yrs.	♂	W	2 mos.	+	+	+	—	4	Clear	8d	No recurrences
23	R. C.	2½ yrs.	♂	W	..	+	+	+	—	4	Clear	8d	
24	M. D.	12 mos.	♀	W	4 mos.	+	+	+	—	1	Improved	2d	Decrease in pruritus
25	D. J. R.	11 yrs.	♀	C	10½ yrs.	+	+	+	Impetigo	2	Cleared	4d	
26	R. R.	5 yrs.	♂	W	..	+	+	+	—	4	Clear	8d	Relapsed after 10 mos.
26	R. R.	6 yrs.	♂	W	2 mos.	+	+	+	—	6	Clear	12d	No recurrences
27	J. A. F.	7 yrs.	♀	W	3 wks.	+	+	+	—	6	Clear	12d	
28	J. B.	3 yrs.	♂	W	..	+	+	+	—	2	Clear	1wk	
29	L. P.	2 yrs.	♂	W	6 mos.	+	+	+	—	4	Clear	8d	Relapsed
29	L. P.	2 yrs.	♂	W	2 mos.	+	+	+	—	1	Clear	2d	No further relapses
30	M. L. H.	4 yrs.	♀	C	4 yrs.	+	+	+	—	4	Clear	8d	
31	G. F.	6 yrs.	♀	W	6 yrs.	+	+	+	—	1	Clear	2d	
32	G. F.	4 yrs.	♀	W	4 yrs.	+	+	+	—	1	Clear	2d	
33	W. R.	8 yrs.	♂	W	1 yr.	+	+	+	+	5	Clear	10d	
34	N. G.	7 yrs.	♀	W	..	+	+	+	—	3	Clear	6d	
35	J. M.	2 yrs.	♂	W	3 wks.	+	+	+	+	2	Clear	4d	
36	M. C.	5 yrs.	♀	W	..	+	+	+	—	3	Clear	6d	
37	B. J. A.	3 yrs.	♀	W	..	+	+	+	—	4	Clear	8d	
38	T. R.	1 yr.	♂	W	..	+	+	+	+	4	Clear	8d	
39	J. O.	3 yrs.	♂	W	..	+	+	+	—	4	Clear	8d	
40	M. B.	6 yrs.	♂	W	..	+	+	+	—	1	Clear	2d	
41	S. B.	2 yrs.	♀	W	..	+	+	+	—	4	Clear	8d	
42	G. R.	2 yrs.	♂	W	1 wk.	+ with bullous reaction	+	+	+	4	Clear	8d	Remained clear for 2 mos., then relapsed
43	J. A. C.	3 yrs.	♀	W	..	+	+	+	—	4	Clear	8d	
44	LaV. G.	6 yrs.	♂	W	1 wk.	+	+	+	—	4	Clear	8d	
45	M. F.	2 yrs.	♀	W	..	+	+	+	—	4	Clear	8d	
46	Z. E. E.	4½ yrs.	♀	W	..	+	+	+	—	6	Clear	2d	Patient cleared after 1st injection
47	F. R.	3 yrs.	♂	W	Months	+	+	+	—	3	Clear	6d	Relapsed after 2 mos.
48	R. P.	11 yrs.	♂	W	Several months	+	+	+	—	6	Clear	12d	
49	H. K. S.	4 yrs.	♂	W	4 yrs.	+	+	+	+	4	Clear	8d	
50	J. H.	3 yrs.	♀	W	..	+	+	+	—	4	Clear	8d	
51	I. F. A.	7 yrs.	♀	W	2 mos.	+	+	+	—	4	Clear	8d	
52	L. S.	4 yrs.	♀	W	..	+	+	+	—	4	Clear	8d	
53	M. J. H.	2 yrs.	♂	W	Months	+	+	+	—	4	Clear	8d	
54	B. P.	2 yrs.	♂	W	2 yrs.	+	+	+	+	4	Clear	8d	
55	H. S.	3 yrs.	♂	W	1 mo.	+	+	+	—	4	Clear	8d	
56	F. F.	1 yr.	♂	W	Months	+	+	+	—	3	Clear	6d	
57	J. R.	1½ yrs.	♀	W	1 wk.	+	+	+	—	4	Clear	8d	
58	J. P.	2 yrs.	♀	W	..	+	+	+	—	1	Clear	2d	
59	C. B.	7 yrs.	♀	W	..	+	+	+	—	3	Clear	6d	
60	D. B. H.	3 yrs.	♂	W	..	+	+	+	—	4	Clear	8d	
61	B. P.	10 yrs.	♂	W	..	+	+	+	—	1	Clear	2d	
62	D. P.	5 yrs.	♀	W	..	+	+	+	—	1	Clear	2d	
63	J. R.	12 yrs.	♂	W	..	+	+	+	—	6	Clear	12d	
64	D. S.	5 yrs.	♂	W	Weeks	+	+	+	+	4	Clear	3wks	
65	P. M.	4 yrs.	♀	W	1 mo.	+	+	+	—	4	Clear	8d	
66	N. G. L.	2 yrs.	♀	W	..	+	+	+	—	1	Clear	2d	
67	L. S.	3 yrs.	♂	W	1 wk.	+	+	+	—	1	Clear	2d	
68	S. F.	4 yrs.	♂	W	..	+	+	+	—	4	Clear	8d	
69	B. T.	2 yrs.	♀	W	..	+	+	+	—	4	Clear	8d	
70	L. B.	10½ yrs.	♀	W	9 mos.	+	+	+	—	6	Clear	12d	
71	G. H.	2 yrs.	♂	W	1 wk.	+	+	+	—	3	Clear	6d	Remained clear for 1 yr., then relapsed
71	G. H.	3 yrs.	♂	W	..	+	+	+	—	4	Clear	8d	
72	S. W.	3 yrs.	♂	W	5 mos.	+	+	+	—	4	Clear	8d	
73	J. J.	3 yrs.	♂	W	1 wk.	+	+	+	—	4	Clear	8d	
74	G. M.	3 yrs.	♂	W	..	+	+	+	—	4	Clear	8d	
75	R. C.	2 yrs.	♂	W	1 mo.	+	+	+	—	2	Clear	7d	
76	J. B. C.	3 yrs.	♀	W	2 yrs.	+	+	+	—	4	Clear	8d	
77	V. A. C.	1 yr.	♀	W	1 wk.	+	+	+	—	3	Clear	6d	
78	S. H.	2 yrs.	♀	W	1 yr.	+	+	+	—	2	Clear	4d	
79	J. A.	6 yrs.	♀	W	4 mos.	+	+	+	—	6	Clear	2wks	
80	K. A.	3 yrs.	♀	W	..	+	+	+	—	4	Clear	8d	
81	M. W.	5 yrs.	♂	W	..	+	+	+	—	6	Clear	14d	
82	C. W.	2 yrs.	♀	W	..	+	+	+	—	4	Clear	8d	
83	J. M. B.	2 yrs.	♂	W	..	+	+	+	—	4	Clear	8d	
84	R. J. B.	4 yrs.	♂	W	..	+	+	+	—	4	Clear	8d	
85	T. V. J.	2 yrs.	♂	W	..	+	+	+	—	4	Clear	8d	
86	B. L.	3 yrs.	♀	W	3 wks.	+	+	+	—	2	Clear	4d	Remained clear for 1 yr., then relapsed

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TABLE 1.—*Benefit from Flea Antigen—Continued*

Case No.	Name	Age	Sex	Race	Duration of Symptoms	Presence of Wheal	Irritation	Pruritus	Secondary Infection	No. of Injections	Results	Time	Comment
86	B. L.	4 yrs.	♀	W	..	+	+	+	—	1	Clear	2d	
87	R. J.	1 yr.	♂	W	1 wk.	+	+	+	—	4	Clear	8d	
88	J. McC.	8 yrs.	♀	W	..	+	+	+	—	3	Clear	6d	
89	E. D.	2 yrs.	♂	W	3 wks.	+	+	+	—	3	Clear	6d	
90	D. S.	2 yrs.	♀	W	..	+	+	+	—	3	Clear	6d	
91	M. A. S.	5 yrs.	♀	W	..	+	+	+	—	5	Clear	24d	Patient cleared 2 wks. after last injection
92	M. S.	2 yrs.	♂	W	..	+	+	+	—	4	Clear	8d	
93	W. E. G.	1 yr.	♂	W	1 wk.	+	+	+	—	3	Clear	6d	Later had new bites without reaction
94	C. H.	1 yr.	♀	W	..	+	+	+	—	2	Clear	4d	
95	E. M.	5 yrs.	♂	W	..	+	+	+	+	3	Clear	6d	
96	B. M.	2 yrs.	♀	W	..	+	+	+	—	4	Clear	8d	
97	M. P.	9 yrs.	♂	W	Weeks	+ with urticarial reaction	+	+	—	6	Clear	14d	
98	S. M.	7 yrs.	♀	W	..	+	+	+	—	6	Clear	14d	
99	W. W.	7 yrs.	♂	W	Years	+ with urticarial reaction	+	+	—	6	Clear	14d	
100	T. D.	6 yrs.	♂	W	2 mos.	+	+	+	—	6	Clear	12d	

TABLE 2.—*Equivocal Benefit from Flea Antigen*

Case No.	Name	Age	Sex	Race	Duration of Symptoms	Presence of Wheal	Irritation	Pruritus	Secondary Infection	No. of Injections	Results	Time	Comment
1	I. G.	3 yrs.	♀	W	Months	+	+	+	—	4	Papules remain; decreased pruritus	8d	Relapse in 4 mos.
2	J. G.	5 yrs.	♀	W	Months	+	+	+	+ Impetigo	6	Papules remain; decreased pruritus	12d	Relapse in 4 mos.
3	L. S.	3 yrs.	♂	W	Months	+	+	+	—	4	Papules remain; pruritus intense	8d	
4	D. M.	2 yrs.	♀	W	1 mo.	+ Urticaria	+	+	—	4	Fleas still bite	8d	Disappearance of urticaria
5	B. L. K.	2 yrs.	♀	W	..	+	+	+	—	4	Papules smaller; decreased pruritus	8d	
6	P. M.	2 yrs.	♂	W	..	+	+	+	—	4	Decreased intensity of reaction	8d	Fleas still bite

TABLE 3.—*Failure to Respond to Flea Antigen*

Case No.	Name	Age	Sex	Race	Duration of Symptoms	Presence of Wheal	Irritation	Pruritus	Secondary Infection	No. of Injections	Results	Time
1	J. W. M.	8 mos.	♂	W	..	+	+	+	—	4	No change	3 mos.
2	A. M. C.	3 yrs.	♀	W	..	+	+	+	—	3	No change	6d
3	J. A.	2 yrs.	♂	W	..	+	+	+	—	2	No response	4d
4	I. H.	1½ yrs.	♀	W	..	+	+	+	—	4	No change	8d
5	C. E.	2½ yrs.	♀	W	..	+	+	+	—	4	No improvement	8d
6	J. A.	3 yrs.	♂	W	4 days	+	+	+	+	4	No change	8d
7	E. S.	3 yrs.	♀	W	Months	+	+	+	—	4	No change	8d
8	D. B.	3 yrs.	♂	W	Months	+	+	+	—	4	No change	8d
9	S. C.	6 yrs.	♀	W	Months	+	+	+	—	5	No change	10d
10	C. F.	2 yrs.	♂	W	5 mos.	+	+	+	—	4	No change	8d
11	A. S.	1 yr.	♂	W	1 wk.	+	+	+	—	3	No change	6d
12	L. McC.	2 yrs.	♂	W	..	+	+	+	—	4	No change	2 mos.
13	T. C.	3 yrs.	♂	W	Weeks	+	+	+	—	4	No response	6d
14	S. G.	3 yrs.	♀	W	..	+	+	+	—	4	No response	8d
15	O. B.	6 yrs.	♂	W	1 wk.	+	+	+	—	6	No response	12d
16	S. H.	6 yrs.	♀	W	Weeks	+	+	+	—	6	No response	12d
17	P. G.	3 yrs.	♀	W	3 wks.	+	+	+	+	4	No response	8d
18	C. G.	2 yrs.	♂	W	3 wks.	+	+	+	—	4	No response	8d
19	D. S.	6 yrs.	♀	W	Weeks	+	+	+	—	4	No response	8d
20	P. B.	6 yrs.	♀	W	..	+	+	+	—	4	No response	8d
21	C. S.	4 mos.	♀	W	1 wk.	+	+	+	+	4	No response	8d
22	L. H.	2 yrs.	♀	W	2 wks.	+	+	+	+	4	No response	9d
23	E. J.	2 yrs.	♂	W	1 mo.	+	+	+	—	4	No response	8d

TABLE 4.—*Case Distribution by Age Group, Sex and Result*

Age Group	Number Benefited			Number Equivocal			Number Not Benefited			Total Number		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0- 4 months	1	..	1	..	..	..	..	1	1	1	1	2
5- 8 months	..	..	..	..	..	..	1	..	1	1	..	1
9-12 months	..	1	1	..	..	..	..	..	..	..	1	1
13-18 months	4	5	9	..	..	..	1	1	2	5	6	11
19-24 months	..	1	1	..	..	..	..	..	..	..	1	1
2- 3 years	27	20	47	2	3	5	8	6	14	37	29	66
4- 5 years	8	8	16	..	1	1	..	..	..	8	9	17
6- 7 years	4	10	14	..	..	..	1	4	5	5	14	19
8- 9 years	3	2	5	..	..	..	..	..	..	3	2	5
10 years and over	4	2	6	..	..	..	..	..	..	4	2	6
Total	51	49	100	2	4	6	11	12	23	64	65	129

TABLE 5.—*Percentage Distribution in Age Groups by Sex and Result*

Age Group	Percentage Benefited			Percentage Equivocal			Percentage Not Benefited			Total Percentage		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0- 4 months	100.0	.....	50.0	.....	.....	.....	.....	100.0	50.0	50.0	50.0	100.0
5- 8 months	.....	.....	.....	.....	.....	.....	100.0	.....	100.0	100.0	.....	100.0
9-12 months	.....	100.0	100.0	.....	.....	.....	.....	.....	.....	.....	100.0	100.0
13-18 months	80.0	83.3	81.8	.....	.....	.....	20.0	16.7	18.2	45.5	55.5	100.0
19-24 months	.....	100.0	100.0	.....	.....	.....	.....	.....	.....	.....	100.0	100.0
2- 3 years	73.0	69.0	71.2	5.4	10.3	7.6	21.6	20.7	21.2	56.1	43.9	100.0
4- 5 years	100.0	88.9	94.1	.....	11.1	5.9	.....	.....	.....	47.1	52.9	100.0
6- 7 years	80.0	71.4	73.7	.....	.....	.....	20.0	28.6	26.3	26.3	73.7	100.0
8- 9 years	100.0	100.0	100.0	.....	.....	.....	.....	.....	.....	60.0	40.0	100.0
10 years and over	66.7	33.3	100.0	.....	.....	.....	.....	.....	.....	66.7	33.3	100.0
Total	79.7	75.4	77.5	3.1	6.2	4.7	17.2	18.4	17.8	49.6	50.4	100.0

TABLE 6.—*Percentage Distribution by Age Groups, Sex and Results*

Age Group	Percentage Benefited			Percentage Equivocal			Percentage Not Benefited			Total Percentage		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0- 4 months	2.0	....	1.0	....	....	....	....	8.3	4.3	1.6	1.5	1.6
5- 8 months	....	....	....	....	....	....	9.1	....	4.3	1.6	....	0.8
9-12 months	....	2.0	1.0	....	....	....	....	....	....	....	1.5	0.8
13-18 months	7.8	10.2	9.0	....	....	....	9.1	8.3	8.7	7.8	9.2	8.5
19-24 months	....	5.0	1.0	....	....	....	....	....	....	....	1.5	0.8
2- 3 years	52.9	40.8	47.0	100.0	75.0	83.3	72.7	50.0	61.0	57.7	44.7	51.1
4- 5 years	15.7	16.3	16.0	....	25.0	16.7	....	....	....	12.5	13.8	13.2
6- 7 years	7.8	20.4	14.0	....	....	....	9.1	33.4	21.7	7.8	21.6	14.6
8- 9 years	6.0	4.1	5.0	....	....	....	....	....	....	4.7	3.1	3.9
10 years and over	7.8	4.1	6.0	....	....	....	....	....	....	6.3	3.1	4.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

treated were given a 1:5,000 dilution of the antigen. Children up to 5 years of age were given 0.1 cc. on the first injection and 0.2 cc. for the remainder of a course of three inoculations. Initial inoculations for patients over 5 years of age consisted of 0.2 cc., which was increased to 0.4 cc. on the second injection and maintained at 0.4 cc. for the remainder of the course of six injections.

Beneficial results from the administration of flea antigen to susceptible persons consisted in smaller size of the incised wheal, shorter duration of the wheal and

TABLE 7.—*Case and Percentage Distribution by Sex and Result*

Sex	Benefited		Equivocal		Not Benefited		Total	
	Number	%	Number	%	Number	%	Number	%
Male	51	51.0	2	33.3	11	47.8	64	49.6
Female	49	49.0	4	66.7	12	52.2	65	50.4
Total	100	100.0	6	100.0	23	100.0	129	100.0

TABLE 8.—*Average Ages for Entire Group and by Result Obtained*

Average age for entire group	4.4 years
Average age of benefited group	3.8 years
Average age of equivocal group	2.8 years
Average age of not benefited group	3.0 years

decrease of irritation and of pruritus. Some patients in McIvor and Cherney's series benefited from the first injection, others not until after the fifth or sixth injection. Some were relieved for two to three months, others were relieved permanently. In none of those treated with flea antigen could circulating antibodies or precipitins be demonstrated in the blood.

In 1943 McIvor and Cherney [3] gave flea antigen to 92 patients whose hypersensitiveness to flea bites was evidenced by urticarial reactions or asthmatic attacks as a result of flea bites. All benefited but 5, and 1 child was made worse by flea antigen.

In the present series 129 susceptible infants and children were given 136 courses of injections in an effort to determine objectively the effect of flea antigen on the duration of symptoms, presence of a wheal, irritation, pruritus and secondary infection. Each child served as his own control, since in each of these patients the symptoms had continued unabated for a period of from one week to one year.

TABLE 9.—*Case and Percentage Distribution by Number of Injections by Result*

Number of Injections	Benefited		Equivocal		Not Benefited		Total	
	No. of Cases	%	No. of Cases	%	No. of Cases	%	No. of Cases	%
1	10	100.0	..	....	..	....	10	100.0
2	10	90.9	..	....	1	9.1	11	100.0
3	16	88.9	..	....	2	11.1	18	100.0
4	47	68.1	5	7.3	17	24.6	69	100.0
5	6	85.7	..	....	1	14.3	7	100.0
6	11	78.6	1	7.1	2	14.3	14	100.0
Total	100	77.5	6	4.7	23	17.8	129	100.0

TABLE 10.—*Case and Percentage Distribution by Number of Injections and Result*

Number of Injections	Benefited		Equivocal		Not Benefited		Total	
	No. of Cases	%	No. of Cases	%	No. of Cases	%	No. of Cases	%
1	10	10.0	..	....	..	....	10	7.7
2	10	10.0	..	....	1	4.3	11	8.5
3	16	16.0	..	....	2	8.7	18	14.0
4	47	47.0	5	83.3	17	74.0	69	53.5
5	6	6.0	..	....	1	4.3	7	5.4
6	11	11.0	1	16.7	2	8.7	14	10.9
Total	100	100.0	6	100.0	23	100.0	129	100.0

The flea antigen used was the product prepared by the method developed by Reed and his associates. It consists of an extract of the whole fleas of cat, dog and human beings (Ctenocephalides felis, Ctenocepha-

3. McIvor, B. C., and Cherney, L. S.: Clinical Use of Flea Antigen in Patients Hypersensitive to Flea Bites, Am. J. Trop. Med. **23**: 377-379 (May) 1943.

lides canis and Pulex irritans) in phenolated isotonic saline solution. An attempt was made to give children up to 5 years of age 0.1 cc. of flea antigen for the first injection and 0.2 cc. for the remainder of a course of at least three inoculations. For children over 5 years of age an attempt was made to give an initial subcutaneous dose of 0.2 cc. and 0.4 cc. for at least five subsequent injections given every other day. The course was repeated as indicated.

The cases have been grouped in three tables according to the results obtained. Table 1 includes patients benefited by flea antigen. Table 2 includes the group whose benefit from flea antigen was equivocal. Table 3 consists of the group who received no benefit from flea antigen.

COMMENT

One hundred and twenty-nine susceptible infants and children, all living in the southern area of Richmond, Calif., were immunized against flea bites by the method of Reed and his associates. Of these, 100, or 78 per cent, were benefited. Six patients, or 5 per cent of the total, received equivocal benefit. Twenty-three, or 17 per cent, failed to respond.

The average age of these patients was 4 years. Of the 129, 68, or 50.4 per cent, were females, and 64, or 49.6 per cent, males. There were only 2 colored patients in the entire group (1.6 per cent), even though the colored group in the general population here is much higher.

Sixty-one patients offered data regarding duration of symptoms. Twenty-six patients (43 per cent) had symptoms from one week to one month before therapy. Twenty-five patients (41 per cent) had symptoms from one month to one year before the institution of flea antigen. Ten patients (16 per cent) gave a history of relative symptoms of over one year preceding therapy.

The presence of an incised wheal was observed in 109 patients (84 per cent). Of these, 3 had papules only, 1 had a bullous reaction and 3 had definite urticaria. In 20 patients (16 per cent) no wheal was seen. All patients had irritation and pruritus. Secondary infection was noted in 20 patients (16 per cent). Of these, 3 had impetigo contagiosa.

In treating these patients, the average number of injections of flea antigen given was four. The average time of response following the initial injection was eight days.

CONCLUSIONS

In a series of 129 susceptible infants and children, 4 out of 5 were benefited by the use of flea antigen. This constitutes a demonstration of one method of developing host immunity to insect bites. The importance of this demonstration lies in the possibility of the use of such a method as an adjunct in the control of insect borne diseases.

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Common Errors in Statistical Interpretation of Medical Data.—Current medical literature is made up in great part of an analysis and an interpretation of clinical data: often a series of cases of a newly observed syndrome is reported. In other circumstances a study is made of the effect of a new surgical technic; frequently new methods of treatment are devised. These observations that have been made so painstakingly require suitable statistical analysis and interpretations. Are the results that have been secured of real significance or might the same results have been obtained by chance variation?—Smillie, Wilson G.: Preventive Medicine and Public Health, New York, Macmillan Company, 1946.

Clinical Notes, Suggestions and New Instruments

ACUTE OSTEOMYELITIS IN A NINETEEN DAY OLD INFANT

LIEUTENANT BERNARD H. SHULMAN (MC), U.S.N.R.

This is a report of a case of acute osteomyelitis in a 19 day old infant. Cases of osteomyelitis in childhood are not unusual, but it is felt that the occurrence of this condition during the neonatal period is rare and worthy of recording. In addition, the therapeutic value of penicillin is demonstrated in controlling the acute phase of the infection.

REPORT OF CASE

D. D., a white boy aged 19 days, was admitted as a Navy dependent to the pediatric service of the Newport Hospital, Newport, R. I., because of elevated temperature and swelling of the left thigh of two days' duration.

Fig. 1.—Appearance at time of admission, showing soft tissue swelling around the left femur. There is no evidence of pathologic change in the bones.

The infant was born at full term by spontaneous delivery and weighed 7 pounds 1 ounce (3,200 Gm.). He had an uneventful, afebrile, neonatal course in the nursery and was discharged on the ninth day of life after having reached birth weight. His formula consisted of an evaporated milk, water, dextrimaltose mixture.

The mother stated that the child seemed to cry when he was handled, shortly after reaching home. However, he took his formula readily and there were no visible signs of infection. Two days before admission, at the age of 17 days, the infant became restless, fed poorly and developed a fever of 102 F. At this time a swelling of the left thigh was observed, and two days later, at the age of 19 days, the child was admitted to the hospital.

On entry the child appeared acutely ill. The temperature was 100 F., the pulse rate 136 per minute and the weight 8 pounds 3 ounces (3,714 Gm.). Physical examination was negative except for the findings of the left leg. There was swelling of the left thigh, with tenseness and moderate fluctua-

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tion in the outer aspect. The leg was held in abduction and external rotation, with flexion at the hip and knee. The child cried with any attempt to move the affected leg actively.

The suspected deep abscess was aspirated and a small amount of green pus was obtained. Smear of this material showed many pus cells but no organisms. Culture of the material revealed unidentifiable gram-positive organisms.

On admission the white blood cell count was 21,200, with 72 per cent polymorphonuclears, 14 per cent lymphocytes and 14 per cent monocytes. The hemoglobin was 100 per cent and the red blood cells 3,500,000 per cubic millimeter. The urine was normal. An x-ray (fig. 1) taken shortly after admission showed soft tissue swelling at the upper part of the left leg. There was no evidence of pathologic changes in the bones.

On the suspected hospital day 10 cc. of thick green pus was obtained by incision of the fluctuant, swollen thigh. Culture of this material revealed a pure growth of nonhemolytic Staphylococcus aureus. A blood culture, obtained with difficulty on the same day, was positive for nonhemolytic Staphylococcus albus. This was felt to be a contaminant.

Treatment was instituted immediately on hospitalization. Penicillin was given intramuscularly in doses of 10,000 units every three hours. In addition, local hot compresses were applied to the swollen thigh. The child received 40,000 units of penicillin on the first day and 80,000 units daily for the next seven days. On the ninth and tenth hospital days the child

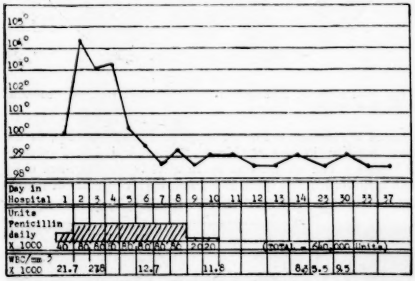

Fig. 2.—Course in the hospital.

received 20,000 units daily. On the eleventh day the drug was discontinued. In all, the patient received 640,000 units of penicillin.

During the course of therapy the condition of the child improved remarkably. The temperature, which ranged from 100 to 104 F. during the first four days, returned to normal on the sixth day and stayed normal during the remainder of the period of hospitalization, as shown in figure 2. Frequent white blood cell counts showed a steady decline from a leukocytosis of 27,800 on the second day to 8,350 on the ninth day, with concomitant reduction of polymorphonuclears. The red blood cell count remained at approximately 3,500,000 per cubic millimeter.

A second x-ray (fig. 3), taken on the ninth hospital day, showed periosteal reaction and osteomyelitis of the upper third of the left femur. On the twenty-second hospital day another x-ray (fig. 4) of the left femur showed advanced osteomyelitis, with necrosis of the head.

The general nutritional status was maintained by augmenting the regular formula with multivitamins, iron and calcium caseinate. The infant fed well and required no parenteral therapy. Weight gain was slow but steady.

After two weeks the child voluntarily moved the left leg, although he resented active movement. At no time was the leg placed in any orthopedic appliance.

On the thirty-seventh hospital day the child was discharged to the parents, who wished to return to their home following the impending honorable release of the father from active service with the U. S. Navy. The parents were advised to secure orthopedic care for the child soon after reaching their destination.

SUMMARY

1. Acute osteomyelitis occurred in a 19 day old infant. This seems to have been of hematogenous origin, and the etiologic agent was a nonhemolytic Staphylococcus aureus cultured from the pus following drainage of a communicating soft tissue abscess.

Fig. 3.—Appearance on the ninth day of hospitalization and eleven days after onset of local tissue swelling: periosteal reaction at the upper end of the left femur, with osteomyelitic process involving the upper third of the bone.

Fig. 4.—Advanced osteomyelitic process of the upper third of the left femur on the twenty-second hospital day, with loss of the anatomic contour of the head of the bone. Soft tissue calcification is present.

2. Penicillin was demonstrated to be life saving. The infant received a total of 640,000 units of calcium penicillin, given intramuscularly over a ten day period. The coincident reduction in temperature and reversion of the white blood cell count to normal paralleled the improvement in the patient's condition and occurred during the course of penicillin therapy.

3. X-rays showed bone changes in the evolution of the osteomyelitic process.

4. Further care of the patient was interrupted because of the parents' desire to travel home following the father's honorable discharge from the U. S. Navy.

DUODENAL BEZOAR RESULTING FROM PICA AND OBSTRUCTION OF MESENTERY ARTERY

GORDON McHARDY, M.D.
and
DONOVAN C. BROWNE, M.D.
New Orleans

Chronic duodenal dilatation and stasis created by an anomalously positioned superior mesenteric artery compressing the third portion of the duodenum where it traverses the spine is not unusual. This obstructive phenomena is commonly intermittent, varies greatly in degree of severity and most often is concomitant with the habitus asthenicus contributing in the production of the Weir-Mitchell individual, so common and chronic a problem to the gastroenterologist.

Fig. 1.—Extracolonic foreign bodies revealed with barium enema in vicinity of the right transverse process of the fourth lumbar vertebra.

Predisposition to foreign body retention or bezoar formation would seem likely in such individuals. A multitude of objects found in the duodenum and listed by Kellogg include pins, needles, buttons, coins, wood fragments, bones, nails, knives, spoons, buckles, false teeth, hair, pencils, esophageal instruments, prune and olive pits and string. Their retention therein was in no instance related to the type of duodenal obstruction under consideration. Reported bezoars of the duodenum have all been secondary, resulting from extension of a gastric bezoar. As such they are extremely rare; a primary duodenal bezoar enters into the realm of medical curiosities.

It is therefore justifiable to report a duodenal foreign body which in itemization qualifies as a bezoar. This duodenal accumulation had its causation in a pathologic individual in that organically the patient was proved to have an anomalous mesenteric artery position; mentally she ingested articles conducive to the creation of a bezoar.

From the Department of Medicine, Tulane University Medical School, and the Gastrointestinal Department, Touro Infirmary.

REPORT OF CASE

J. P., a girl aged 6 years, of French extraction, had experienced an uneventful childhood until six months prior to our seeing her on March 26, 1943. The referring physician had observed her for six months, during which period she had retained a radiopaque foreign body, presumably a coin, in the same position in the enteric tract and had lost 7 pounds (3.2 Kg.). The weight loss in an already malnourished child with quantitative dyspepsia was coupled with episodes of nausea and emesis as the entire symptomatology.

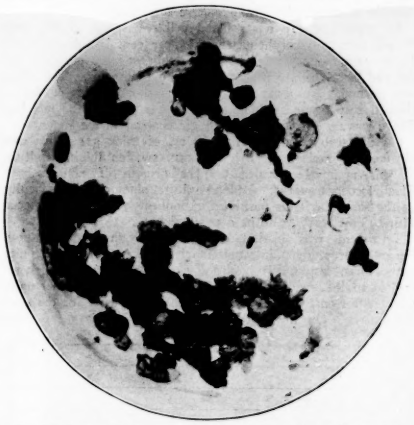

Fig. 2.—Portion of disintegrated bezoar removed from the duodenum at the first operation.

Fig. 3.—Barium delineation of the stomach and duodenum showing the duodenal enlargement and retention.

Physical findings other than evidence of malnutrition and niacin deficiency were those of asthenic habitus and leathery tan skin pigmentation like that of a Mediterranean, despite normal parental skin characteristics.

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Positive laboratory findings included a hypochromic microcytic anemia, lambliasis and amebiasis.

X-ray examination of the abdomen on March 26 revealed two radiopaque foreign bodies, one discoid and the other a ring, overlying the right transverse process of the fourth lumbar vertebra. On May 31 an additional foreign body, presumably a button, was present. In the interval the two varieties of intestinal parasites were eradicated. However, the patient's emesis became progressively severe, with apparent partial persistent high intestinal obstruction.

Surgical intervention was elected. On June 9 the bezoar was extracted by Dr. J. D. Rives from a tremendously distended duodenum; it was impossible to mobilize the bezoar back into the stomach. The duodenum was elongated, atonic and of a 3 inch diameter; it was sharply angulated at the site of definitely demonstrable mesenteric compression. There was no intraluminary obstruction. The patient's status at the time contraindicated further surgery.

An inventory of the bezoar revealed kapok, thread, a copper cent, a small gold plated ring, persimmon seeds and hull, prune pits, buttons, hair, watermelon seeds, vegetable débris, wood fragments, bone spicules, string, fragments of cloth and paper.

Temporary improvement and weight ensued on a low residue dietary regimen. However, a year subsequent recurrent symptoms indicated x-ray evaluation, which showed her status unimproved. On this occasion a gastrointestinal visualization demonstrated the obstructed duodenum as illustrated in figure 3.

Fig. 4.—Delineation of the satisfactorily functioning duodenojejunostomy with return of essentially normal duodenal tonus.

On July 30 a duodenojejunostomy was done by Dr. Rives. Most recent evaluation on April 9, 1945 showed curative results with a well functioning duodenojejunostomy permitting normal gastrointestinal transfer of even the continued outlandish ingestions of the patient, who during operative convalescence was detected eating kapok from her pillow.

1534 Aline Street, New Orleans 15.

Place of Science in the Scheme of Culture.—This testing of the place of science in the scheme of culture has been general, but the issue has consequences so determining as to deserve and indeed require illustration in a special case. It is a situation which deserves careful analysis. Science having become decisive in many aspects of the practical life, in engineering, in pharmacology, in agriculture, citizens demand opportunity for becoming familiar with contributions now so vital to human comfort, not to say happiness. The orientation of nations differs and differs signally. One conspicuous difference is the American attitude toward science. The universities exhibit this attitude in a striking fashion reflecting, as they do, the national dependence on science.—Cohn, Alfred E.: Minerva's Progress, New York, Harcourt, Brace & Co., 1946.

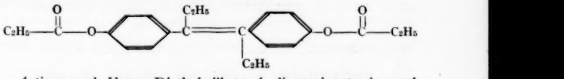
Council on Pharmacy and Chemistry

NEW AND NONOFFICIAL REMEDIES

The following articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application.

AUSTIN SMITH, M.D., *Secretary.*

DIETHYLSTILBESTROL DIPROPIONATE.—The *di*-propionyl ester of α,α'-diethyl-4,4'-stilbenediol.—$C_{26}H_{34}O_4$—M. W. 380.46.—Diethylstilbestrol dipropionate may be prepared by esterification of diethylstilbestrol with propionic acid chloride and purified by recrystallization from alcohol. It may be represented by the following structural formula:



Actions and Uses.—Diethylstilbestrol dipropionate is used for the same conditions for which estrogenic substances are employed, although it is claimed that reactions such as nausea and vomiting appear to be less frequent with a dipropionate salt than with free diethylstilbestrol when the drugs are administered intramuscularly in oil. Diethylstilbestrol dipropionate is relatively slowly absorbed from the oil depot and causes a lower blood stream concentration, although one of more prolonged duration.

Dosage.—Diethylstilbestrol Dipropionate in Oil is administered intramuscularly. The following average dosage by injection should be modified to meet individual requirements:

Menopause } from 0.5 to 2 mg. two or three times a week.
Senile vaginitis }

Suppression of lactation—5 mg. once or twice daily for a total of from two to four days.

After a therapeutic effect has been obtained, the dosage should be reduced until the minimum effective dose for maintenance has been established.

Tests and Standards.—

Diethylstilbestrol dipropionate occurs as an odorless, tasteless, white, crystalline powder which melts at 105-107° C. It is readily soluble in acetone, benzene, ether, chloroform, hot ethyl alcohol and hot methyl alcohol; soluble in vegetable oils; very slightly soluble in water and dilute mineral acids; and insoluble in alkaline aqueous solutions.

Dissolve 10 mg. of diethylstilbestrol dipropionate in 2 cc. of concentrated sulfuric acid: an orange color is produced which disappears on dilution with water. Add 1 cc. of 50 per cent solution of antimony pentachloride in dry alcohol-free chloroform to 5 cc. of a dilute solution of diethylstilbestrol dipropionate in the same solvent: a red colored solution is produced. The residue obtained in the assay for diethylstilbestrol dipropionate melts at 168-171° C. and responds to tests for diethylstilbestrol.

Dry an accurately weighed specimen of diethylstilbestrol dipropionate to constant weight in a partial vacuum at 80° C.: the loss in weight does not exceed 0.5 per cent. Ignite an accurately weighed specimen of diethylstilbestrol dipropionate after the addition of concentrated sulfuric acid: the residue does not exceed 0.05 per cent. A suspension of 0.1 Gm. of diethylstilbestrol dipropionate in 10 cc. of diluted alcohol is neutral to litmus paper.

Dissolve approximately 0.3 Gm. of diethylstilbestrol dipropionate, accurately weighed, in 10 cc. of a 15 per cent solution of potassium hydroxide in methyl alcohol and heat under reflux for thirty minutes. Cool, dilute with 100 cc. of water, transfer to a separator and acidify with dilute hydrochloric acid. Extract the mixture with four separate portions of ether, combining the ether extracts; wash the ether solution with three separate portions of 5 per cent sodium bicarbonate solution and once with water; decant the ether solution through a small cotton plug into a tared beaker; rinse the separator and cotton plug with fresh ether and evaporate the ether extract in a stream of warm air. Dry the residue to constant weight at 75-80° C.: the weight of the diethylstilbestrol obtained, multiplied by the factor 1.418, is equivalent to not less than 98 per cent nor more than 100.5 per cent of the weight of the specimen.

The following dosage form has been accepted:

WINTHROP CHEMICAL COMPANY, INC., NEW YORK

Solution Diethylstilbestrol Dipropionate (in Olive Oil): 0.5 mg. per cc., 1 mg. per cc. and 5 mg. per cc.: 1 cc. ampuls.

HEXAVITAMIN (See THE JOURNAL, Aug. 11, 1945, p. 1099).

The following dosage form has been accepted:

WALKER VITAMIN PRODUCTS, INC., MOUNT VERNON, N. Y.

Capsules Hexavitamin: Each capsule contains 2,500 U. S. P. units of vitamin A, 200 U. S. P. units of vitamin D, 1 mg. of thiamine, 1.5 mg. of riboflavin, 30 mg. of ascorbic acid and 10 mg. of niacinamide.

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SATURDAY, MARCH 30, 1946

RETIREMENT OF DR. OLIN WEST, SECRETARY-GENERAL MANAGER

According to the official announcement from the Board of Trustees which appears elsewhere in this issue, Dr. Olin West, Secretary-General Manager of the American Medical Association for more than twenty-three years, retires from his official duties on April 1. The intense devotion of almost a quarter of a century of unremitting diligence in behalf of the progress of the American Medical Association and of its policies for the maintenance of medicine as a profession has taken a considerable toll of his energy.

Dr. Olin West came to the American Medical Association with a record of experience in medicine and public health that especially fitted him for the positions that he assumed. His preliminary education was received at Howard College in Alabama, in which state he was born at Gadsden on July 12, 1874. He graduated from Vanderbilt University School of Medicine, Nashville, Tenn., in 1898. In 1910, after twelve years of practice in Nashville and fifteen years as a member of the faculty of Vanderbilt University, first as instructor and later as assistant professor and associate professor in chemistry, Dr. West became director for the Rockefeller Sanitary Commission and International Health Board in Tennessee. Here he was especially effective in the great campaign against hookworm infection. In 1918 he became secretary and executive officer of the Tennessee State Board of Health and after four years gave up that position to become field secretary of the American Medical Association in association with Dr. Alexander Craig, who was at that time Secretary. Following the death of Dr. Craig, Dr. West was appointed Secretary by the Board of Trustees. Then when Dr. George H. Simmons resigned as Editor and General Manager of the Association in 1924, Dr. West continued in the position of Secretary and succeeded to the duties of General Manager.

In early activities for the organized medical profession Dr. West was president of the Middle Tennessee Medical Association and later secretary of the Tennessee State Medical Association and editor of its journal. His love for the art and tradition of medical science, his great personal compassion, his geniality and his friendliness have endeared him personally to many thousands of American physicans who have met him in office and who have had advantage of his personal counsel and judgment.

The Journal wishes to Dr. West on his retirement many years of healthful life and many hours in which he can devote himself to his family and his friends, realizing at the same time that his interest in medicine and particularly in the advancement of the American Medical Association will never lag. Certainly the committees and the councils of the Association will continue to utilize as far as possible the experience and the judgment which have meant so much toward achieving the high place that the American Medical Association occupies today among medical organizations throughout the world.

BRITAIN'S NATIONAL HEALTH ACT

Regardless of the preliminary publicity and the prolonged incubation period, the announcement of the proposals for the nationalization of medical services in Great Britain was startling. Apparently the British government proposes to take over—in every sense of those words—the hospitals and the medical practices of British physicians. Thus a nation which fought to a successful issue against totalitarianism now proposes to enslave its own medical profession and to make of every one of its physicians a clock-watching civil servant. Men who formerly devoted their lives wholeheartedly to the care of the sick and to the relief of pain and suffering will now be spending their hours trying to satisfy the whims of the bureaucrats and to disencumber themselves from the red tape that bureaucrats inevitably weave. What the government leaders urge as a step forward in the prevention and control of disease will be considered by representatives of medical science everywhere as one of the most backward steps ever conceived for a civilized nation.

In an address on "The Science and Art of Medicine" delivered by Sir Lionel Whitby as his inaugural lecture as regius professor of physic in Cambridge University, the distinguished British physician said:

> The simple facts are that medicine is both a science and an art. It is true that medicine will never be an exact science, because the normal variations in individuals have such a wide range that automatic and mechanical treatment is prohibited,

whilst every patient requires a different method of approach according to his psychology. This, the frequently ridiculed bedside manner, which secures the confidence of the patient, is of fundamental importance in practice; it is an art which is inborn and not acquired. Nevertheless, even the most confirmed artist cannot now neglect to keep up to date with the facts and findings of science upon which his diagnosis and treatment must be based. Nor will the artistic claim be very sympathetically received by a court of law, should the claimant have neglected the scientific aspect. But one of the attractions of the profession is the personal and individual character of its practice: the latitude with which a qualified doctor may exercise his own judgment, express his own opinions and practice his own art. *This, indeed, is one of the strongest objections to nationalization and standardization. If the profession of medicine be robbed of its scope for individuality, the soul will go out of it* [italics ours].

Thus from a British leader comes new emphasis on the points that great American physicians have emphasized in their opposition to socialized or political medicine.

During the great war just ended scientific medicine advanced tremendously. The development of the antibiotic drugs, of blood derivatives, of new surgical technics, of controls over insect-borne diseases are among the steps that will increase life expectancy and even perhaps reduce the incidence of such diseases as pneumonia and the venereal diseases, as typhoid and diphtheria have been decreased. In the face of constant advancement and ever diminishing morbidity and mortality the politicians would promote a revolution in methods of medical education, medical research and medical care, unthinking that the steps they propose may halt if not destroy the scientific medical forces that have yielded these results.

Especially sad is the British proposal that the government take over the private hospitals which have been the pride of the democracies for more than a century. Our Catholic, Protestant and Jewish hospitals have grown out of that fundamental tenet of all great religions that the care of the sick is one of the highest spiritual motives to which man can attain. Britain's act proposes that these hospitals become creatures of an automatic routine ridden government bureaucracy. Thus sick human beings would become cards in a government index representing robots, which, when incapacitated, would receive the ministrations of employed doctors reduced to the status of subservient mechanics.

Perhaps the long controversial debate to which this arbitrary and revolutionary legislation is certain to be subjected in the British parliament will develop some means for retaining in Great Britain the spirit and the tradition that have earned for British medicine up to now the respect of scientists throughout the world.

STREPTOMYCIN THERAPY OF WHOOPING COUGH

Encouraging data as to the therapeutic effects of streptomycin in the treatment of experimental murine pertussis are reported by Bradford and Day[1] of the Department of Pediatrics, University of Rochester. Three week old Swiss mice were inoculated intranasally with 0.05 cc. of a suspension of freshly isolated Hemophilus pertussis. The inoculations were usually made in subgroups of 5 mice, the doses given to the different subgroups being approximately 125, 31.2, 7.8, 1.9 and 0.47 million micro-organisms, or a 1:4 serial dilution of the initial suspension. After inoculation the mice were kept under uniform environmental conditions for a ten day period, with deaths recorded daily. At the end of the ten day period necropsies were performed on the surviving mice and cultures made from their lungs.

In a typical experiment 40 mice were inoculated with 1:4 serial dilutions in five duplicate subgroups. Four hours later, five subgroups were injected subcutaneously with 130 units of streptomycin. This dose was repeated every six hours for the next five days. Five control or untreated subgroups were injected with an equal volume (0.2 cc.) of saline solution. In the five treated subgroups there was but one fatality. This was in the subgroup given the largest infectious dose (125 million H. pertussis). Of the 19 surviving mice in the treated subgroups, 14 had sterile lungs at the end of ten days. Among the untreated control subgroups 9 mice died. But 2 of the 11 survivors in the untreated groups gave negative pulmonary cultures. The calculated 50 per cent minimum lethal dose for the treated groups was more than 125 million micro-organisms. For the untreated groups the calculated 50 per cent minimum lethal dose was 12.7 million. This suggests that there was a tenfold increase in natural pertussis resistance as the result of streptomycin therapy.

In a second experiment with a slightly more virulent strain of H. pertussis there was a 100 per cent survival with sterile lungs following 250 unit doses of streptomycin given intra-abdominally four times daily for five days. In the untreated control subgroups (20 mice) there were but 5 survivors. Only 1 of these had sterile lungs. In a parallel therapeutic test with penicillin there were 7 survivors with 2 sterile lungs. Penicillin is thus without therapeutic promise.

The therapeutic value of streptomycin as indicated by these and other data is sufficient to justify its trial in human medicine. Clinical trials are now in progress in the Department of Pediatrics, Rochester University.

1. Bradford, W. L., and Day, E.: Proc. Soc. Exper. Biol. & Med. **60**: 324 (Dec.) 1945.

Current Comment

THE PERIODICITY OF INFLUENZA

Many attempts have been made to find a cyclic pattern for influenza and to determine its periodicity. In a recent communication [1] from the Commission on Acute Respiratory Diseases the previous theories have been reviewed and the problem reconsidered in the light of experiences between 1920 and 1944. The report points out that there have been sixteen widespread epidemics of influenza in the United States since 1920. The analysis of the patterns of these epidemics led to advancing the theory that they could be accounted for on the basis of two specific recurring infections. According to the interpretation it appears that influenza A has a cycle of two to three years and influenza B a cycle of four to six years. Evidence that other influenza viruses have caused epidemics of a widespread nature during the past twenty-five years was not obtained. The hypothesis is also advanced that the occurrence of influenza epidemics is determined principally by the balance relationship between immune and susceptible persons in the community. The commission has, moreover, hazarded a forecast of the probability of occurrence of further epidemics of influenza within certain time limits. The study has been hampered by the inability to determine which influenza viruses were responsible for the earlier epidemics; only recently could this be determined. The prophecy made may or may not prove accurate. Whenever a forecast of this type can be made successfully the possibilities of controlling epidemics of influenza will be greatly improved.

PLANNING BY THE COMMONWEALTH FUND

In the Annual Report of the Commonwealth Fund, 1945,[1] Mr. Barry C. Smith takes the President's health message as a challenge to American medicine to prove that it can do the job better than can the government. "When wholesale extension of medical and hospital services is proposed," says the report, "it is time to ask more critically than ever before whether those services are as nearly right for the functions they are intended to fulfil as hard, clear thinking can make them." Mr. Smith feels that the most conspicuous defect in the medical picture is the paucity of well trained people. The previous experience of the Commonwealth Fund leads to the conviction that rural medicine will continue to lag until rural physicians are far better trained than they are today and that public health service lags for a lack of health officers competent to do more than a routine job. Mr. Smith says also that the number of well or indifferently trained psychiatrists is too few to cope with the present distribution of mental disease and marginal disability. Moreover, the report asserts it is not alone the quantity but the quality of professional training that needs attention. Because of the many questions that have not been solved as to patterns of action, the Commonwealth Fund is determined to keep its relatively small resources and its policy fluid until the place of philanthropic funds in these shifting patterns becomes clear. For that reason the objectives to be supported by this foundation during the next period will include:

1. Sound training for professional and technical workers in strategic phases of health maintenance.
2. The broadening and integration of the basic concepts of medical care so that it may become truly comprehensive.
3. The practical encouragement of human curiosity as the fountainhead from which medical knowledge renews itself.

Among the special projects in which this fund will be engaged is an attempt to increase the educational qualifications of certain hospitals by supplying them with educational supervisors who will furnish guidance in the education of house officers. In several institutions attempts are being made to integrate psychiatry and internal medicine. Most important, however, is a large scale experiment which is being developed near Rochester, N. Y., with a view to showing how the existing resources of rural medicine can profitably be supplemented by those of a regional center. The plan involves a linking of the rural hospitals in seven counties near Rochester with the institutions in Rochester with a view to providing a high type of medical care throughout the area.

LOS ANGELES COUNTY MEDICAL ASSOCIATION CELEBRATES SEVENTY-FIFTH ANNIVERSARY

On the last evening of January in 1871 a group of seven Los Angeles physicians organized the Los Angeles County Medical Association. At that time the official population of Los Angeles was 6,598 and that of Los Angeles County, which included what is now Orange County, was about 16,000. During the interval since its organization Los Angeles has become one of the world's largest cities and the county one of the most heavily populated in the country. The Los Angeles County Medical Association has grown correspondingly. Its Bulletin for January 31 celebrates with a seventy-fifth anniversary number, reviewing the history of the association. This issue of the Bulletin contains information of historical value. Both the Los Angeles County Medical Association and its Bulletin can be congratulated on their contributions to the health of the community and to the advancement of the medical profession during a period of phenomenal growth.

RADIO TRANSCRIPTS ON MEDICAL CARE PROBLEMS

Elsewhere in this issue (page 881) appears an announcement of a series of six radio transcriptions on subjects of economic medicine. These have been prepared by the Council on Medical Service and Public Relations in cooperation with the Bureau on Health Education of the A. M. A. They represent an additional service furnished by the Council and the Bureau which is now available to local medical societies.

1. The Commission on Acute Respiratory Diseases, Fort Bragg, North Carolina? The Periodicity of Influenza, Am. J. Hyg. **43**: 29 (Jan.) 1946.

1. Twenty-Seventh Annual Report of the General Director for the Year Ending September 30, 1945, New York, Commonwealth Fund, 1946.

NATIONAL HEALTH PROGRAM OF THE AMERICAN MEDICAL ASSOCIATION

Adopted by the Board of Trustees and the Council on Medical Service, Feb. 14, 1946

1. The American Medical Association urges a MINIMUM STANDARD OF NUTRITION, HOUSING, CLOTHING AND RECREATION as fundamental to good health and as an objective to be achieved in any suitable health program. The responsibility for attainment of this standard should be placed as far as possible on the individual, but the application of community effort, compatible with the maintenance of free enterprise, should be encouraged with governmental aid where needed.

2. The provision of PREVENTIVE MEDICAL SERVICES through professionally competent health departments with sufficient staff and equipment to meet community needs is recognized as essential in a health program. The principle of federal aid through provision of funds or personnel is recognized with the understanding that local areas shall control their own agencies as has been established in the field of education. Health departments should not assume the care of the sick as a function, since administration of medical care under such auspices tends to a deterioration in the quality of the service rendered. Medical care to those unable to provide for themselves is best administered by local and private agencies with the aid of public funds when needed. This program for national health should include the administration of MEDICAL CARE, INCLUDING HOSPITALIZATION TO ALL THOSE NEEDING IT BUT UNABLE TO PAY, such medical care to be provided preferably by a physician of the patient's choice with funds provided by local agencies with the assistance of federal funds when necessary.

3. The procedures established by modern medicine for advice to the prospective mother and for ADEQUATE CARE IN CHILDBIRTH should be made available to all at a price that they can afford to pay. When local funds are lacking for the care of those unable to pay, federal aid should be supplied with the funds administered through local or state agencies.

4. The child should have throughout infancy PROPER ATTENTION, INCLUDING SCIENTIFIC NUTRITION, IMMUNIZATION AGAINST PREVENTABLE DISEASE AND OTHER SERVICES INCLUDED IN INFANT WELFARE. Such services are best supplied by personal contact between the mother and the individual physician but may be provided through child care and infant welfare stations administered under local auspices with support by tax funds whenever the need can be shown.

5. The provision of HEALTH AND DIAGNOSTIC CENTERS AND HOSPITALS necessary to community needs is an essential of good medical care. Such facilities are preferably supplied by local agencies, including the community, church and trade agencies which have been responsible for the fine development of facilities for medical care in most American communities up to this time. Where such facilities are unavailable and cannot be supplied through local or state agencies, the federal government may aid, preferably under a plan which requires that the need be shown and that the community prove its ability to maintain such institutions once they are established (Hill-Burton bill).

6. A program for medical care within the American system of individual initiative and freedom of enterprise includes the establishment of VOLUNTARY NONPROFIT PREPAYMENT PLANS FOR THE COSTS OF HOSPITALIZATION (such as the Blue Cross plans) and VOLUNTARY NONPROFIT PREPAYMENT PLANS FOR MEDICAL CARE (such as those developed by many state and county medical societies). The principles of such insurance contracts should be acceptable to the Council on Medical Service of the American Medical Association and to the authoritative bodies of state medical associations. The evolution of voluntary prepayment insurance against the costs of sickness admits also the utilization of private sickness insurance plans which comply with state regulatory statutes and meet the standards of the Council on Medical Service of the American Medical Association.

7. A program for national health should include the administration of MEDICAL CARE, INCLUDING HOSPITALIZATION, TO ALL VETERANS, such medical care to be provided preferably by a physician of the veteran's choice, with payment by the Veterans Administration through a plan mutually agreed on between the state medical association and the Veterans Administration.

8. RESEARCH FOR THE ADVANCEMENT OF MEDICAL SCIENCE is fundamental in any national health program. The inclusion of medical research in a National Science Foundation, such as proposed in pending federal legislation, is endorsed.

9. The services rendered by VOLUNTEER PHILANTHROPIC HEALTH AGENCIES such as the American Cancer Society, the National Tuberculosis Association, the National Foundation for Infantile Paralysis, Inc., and by philanthropic agencies such as the Commonwealth Fund and the Rockefeller Foundation and similar bodies have been of vast benefit to the American people and are a natural outgrowth of the system of free enterprise and democracy that prevail in the United States. Their participation in a national health program should be encouraged, and the growth of such agencies when properly administered should be commended.

10. Fundamental to the promotion of the public health and alleviation of illness are WIDESPREAD EDUCATION IN THE FIELD OF HEALTH and the widest possible dissemination of information regarding the prevention of disease and its treatment by authoritative agencies. Health education should be considered a necessary function of all departments of public health, medical associations and school authorities.

MEDICINE AND THE WAR

ARMY

ENLISTED MEN ASSIGNED TO THE ARMY SPECIALIZED TRAINING PROGRAM

Following is a government release known as ASF Cir. 56 discussing the disposition of enlisted men assigned to the Army Specialized Training Program for medical training:

2. *Disposition of enlisted men assigned to ASTP for medical training.*

a. Enlisted men assigned to ASTP for medical training who are scheduled to graduate from medical school before 1 July 1946 will not be separated from the Army regardless of age, length of service, critical score, or by virtue of having three or more children under 18 years of age. They will not be permitted to enlist in the Regular Army. They may be separated under existing regulations pertaining to discharge of enlisted men because of undue hardship or because of importance to national health, safety or interest. They will not be separated for any other reasons except as individually authorized by the War Department.

b. Enlisted men assigned to ASTP for medical training who are not scheduled to graduate from medical school prior to 1 July 1946 will be disposed of as follows:

(1) Those enlisted men who meet current War Department criteria for separation may be discharged.

(2) Those enlisted men who are eligible for discharge under 30 April or 30 June criteria and who do not plan to continue their medical studies may be reassigned within the service command until the date of their discharge if their services are needed. If their services are not needed, they will be discharged.

(3) Those enlisted men who do not meet War Department criteria for separation, who do not plan to continue their medical studies, or are not acceptable at an accredited medical school will be transferred to Brooke Army Medical Center, Fort Sam Houston, Texas.

(4) Those enlisted men who are not eligible for separation who signify their intention to continue their medical studies and are acceptable at an accredited medical school will be released from active federal service and transferred to the Enlisted Reserve Corps. Authority for such release will be section I, AR 615-363, and this circular. These men will furnish a certificate from the dean or other similar official of a medical school approved by the Council on Medical Education and Hospitals of the American Medical Association.

HOLD OPHTHALMOLOGIC CONFERENCE AT VALLEY FORGE

A trisession conference of civilian doctors and Army Medical Corps officers specializing in ophthalmology and related plastic surgery was held recently at Valley Forge General Hospital, Phoenixville, Pa. A total of 70 ophthalmologic cases were examined and discussed during the conference, which was opened with a discussion on "Military Plastic Surgery" by Lieut. Col. Bradford Cannon, chief of the Valley Forge General Hospital plastic surgery section. Lieut. Col. Phillips Thygeson, chief of the eye, ear, nose and throat section, presided.

MEDICAL CARE FOR DEPENDENTS

Plans to provide complete and free medical care for dependents of U. S. Army personnel who will arrive in Germany from the United States are now being formed. A particular effort will be made by the Preventive Medicine Division of the Surgeon General's Office to furnish parents with all known facts on contagious diseases prevalent in Germany, especially those to which children are most susceptible, and methods of preventing these diseases. A child health program will be handled by army physicians experienced in the field.

APPOINTED DIRECTOR OF SURGICAL CONSULTANTS DIVISION

Col. Frank L. Cole, formerly commanding officer of Wakeman Hospital Center, Camp Atterbury, Indiana, was recently assigned to relieve Col. Michael E. DeBakey as director of the Surgical Consultants Division, Office of the Surgeon General. Dr. Cole graduated from the University of Illinois College of Medicine, Chicago, in 1914 and was commissioned in the Army Medical Corps in 1917.

ASSIGNED TO ARMY INSTITUTE OF PATHOLOGY

Col. Raymond O. Dart, deputy chief surgeon for the American Forces in the Western Pacific, was recently appointed assistant director of administration, Army Institute of Pathology. Dr. Dart graduated from Rush Medical College, Chicago, in 1916 and entered the service in 1917.

ANNUAL MEETING OF ARMY EPIDEMIOLOGICAL BOARD

The annual meeting of the Army Epidemiological Board will be held April 15-16 in the board room of the National Academy, National Research Building, 2101 Constitution Avenue, Washington, D. C.

ARMY AWARDS AND COMMENDATIONS

Colonel Bruce P. Webster

Col. Bruce P. Webster, New York, was recently presented the Legion of Merit "for exceptionally meritorious conduct in the performance of outstanding services in the Southwest Pacific Area from Sept. 16, 1944 to Oct. 15, 1945. As surgeon, Replacement Command, United States Army Forces in the Far East, Colonel Webster developed the Medical Service within the Replacement Command into an outstanding agency and in addition planned and executed the expeditious processing and assignment of incoming medical department personnel. Subsequently, as director of the control division, Chief Surgeon's Office, General Headquarters, United States Army Forces, Pacific, he was highly successful in initiating and supervising effective measures for the control of venereal disease, care of liberated prisoners of war and medical training of amphibious troops. As senior representative, Office of the Chief Surgeon, Advance Echelon, General Headquarters, he displayed unusual resourcefulness in establishing an echelon of the policies for the expeditious recovery, hospitalization, evacuation and processing of liberated prisoner of war patients. Through his ceaseless effort, extensive professional skill and devotion to duty, Colonel Webster made a distinct contribution to the success of medical service in the Southwest Pacific Area." Dr. Webster graduated from McGill University Faculty of Medicine, Montreal, in 1925 and entered the service July 1, 1942.

Lieutenant Colonel Ronald H. Kettle

The Bronze Star was recently awarded to Lieut. Col. Ronald H. Kettle of the Norwich State Hospital, Norwich, Conn., "for meritorious service in connection with military operations against the enemy from Dec. 5, 1944 to Sept. 2, 1945." Dr. Kettle graduated from Queen's University Faculty of Medicine, Kingston, Ont., in 1928 and entered the service Oct. 17, 1942.

Major Franklin D. Rodabaugh

Major Franklin D. Rodabaugh, Toledo, was recently awarded the Legion of Merit for "exceptionally meritorious conduct in the performance of outstanding services from May 11, 1944 to Jan. 22, 1945." Dr. Rodabaugh graduated from Ohio State University College of Medicine, Columbus, in 1941 and entered the service Aug. 1, 1942.

Captain Robert E. Vorisek

The Bronze Star was recently awarded to Capt. Robert E. Vorisek, New York, for "meritorious achievement in connection with military operations against the enemy on Mindanao, Philippine Islands, from April 17 to Aug. 1, 1945." Dr. Vorisek graduated from Long Island College of Medicine, Brooklyn, in 1941 and entered the service Dec. 30, 1942.

NAVY

EXAMINATIONS FOR APPOINTMENTS AS ASSISTANT SURGEONS

The Bureau of Medicine and Surgery, Navy Department, will convene boards of medical examiners and supervisory naval examining boards May 6-10 at twenty-nine continental United States naval hospitals for the purpose of conducting physical and professional examinations of eligible candidates for appointment to the grades of assistant surgeon and acting assistant surgeon in the U. S. Navy.

The primary purpose behind the setting up of these examinations for appointment to the grade of assistant surgeon has been to establish a channel of appointment for medical officers of the U. S. Naval Reserve who have not served on active duty in commissioned rank for a period of six months. The medical officers of the Naval Reserve within this category are those who have been deferred from active duty under the provisions of the 9-9-9 program and whose total service in commissioned status has been purely inactive in that their training under the conditions of this program have been performed in civilian medical institutions. This is not intended, however, to exclude from participation in these examinations doctors having no affiliation with the Navy, and it is desired to emphasize that applications are invited from all physicians who meet the requirements for appointment to the Medical Corps of the U. S. Navy.

The examinations to be conducted for appointment to the grade of acting assistant surgeon for naval internship will be a departure from the current system of intern appointments in that during the latter years of the war it has been the practice of the Navy Department to appoint qualified medical school graduates to the rank of lieutenant (jg), (MC), U.S.N.R. for naval intern training from a review of credentials submitted by candidates to the Bureau of Medicine and Surgery. In line with the schedule of demobilization and a transition to peacetime operations it has been deemed necessary that the bureau resume the prewar procedure of professionally examining senior medical students for appointment to the grade of acting assistant surgeon in the rank of lieutenant (jg), (MC), U.S.N., for naval internship on completion of their medical education and thus insure the availability of an adequate number of properly qualified appointees at appropriate periods.

The general qualifications for appointment in the Medical Corps of the U. S. Navy are as follows:

A candidate is required to be a citizen of the United States, of more than 21 but less than 32 years of age at the time of appointment and a graduate of or a student in a medical school listed as approved by the Council on Medical Education and Hospitals of the American Medical Association. The age, physical and citizenship requirements for appointment as acting assistant surgeon and assistant surgeon in the Medical Corps of the U. S. Navy are the same.

Candidates for appointment as assistant surgeon are required to be graduates of medical schools listed as approved by the Council on Medical Education and Hospitals of the American Medical Association who have completed their intern training in a civilian or naval hospital or who will complete such training within four months of the date of the examination and who are physically and in other respects qualified.

A candidate for appointment as acting assistant surgeon for intern training is required to be a third or fourth year medical student enrolled in a medical school listed as approved by the Council on Medical Education and Hospitals of the American Medical Association. Third year medical students may apply only for an examination which will be held subsequent to date of completion of their third year of medical school. If found to be physically, professionally and in other respects qualified, successful candidates will receive their appointments on satisfactory completion of their medical school education. For further information, application forms for appointment and other data address the Bureau of Medicine and Surgery, Navy Department, Washington 25, D. C.

The examination will be given at the naval hospitals in Annapolis, Md.; Astoria, Ore.; Bainbridge, Md.; Bethesda, Md.; Brooklyn; Camp LeJeune, N. C.; Charleston, S. C.; Chelsea, Mass.; Corpus Christi, Texas; Dublin, Ga.; Great Lakes, Ill.; Jacksonville, Fla.; Key West, Fla.; Long Beach, Calif.; Mare Island, Calif.; Memphis, Tenn.; New Orleans; Newport, R. I.; Norman, Okla.; Oakland, Calif.; Parris Island, S. C.; Pensacola, Fla.; Philadelphia; Portsmouth, N. H.; Portsmouth, Va.; Quantico, Va.; Sampson, N. Y.; San Diego, and Seattle.

NAVY AWARDS AND COMMENDATIONS

Rear Admiral Luther Sheldon Jr.

The Legion of Merit was recently presented to Rear Admiral Luther Sheldon Jr., who is now medical officer for the Fifth Naval District, Norfolk, Va., for exceptionally meritorious conduct in the performance of service to the government as assistant to the chief of the Bureau of Medicine and Surgery, Navy Department, from June 26, 1940 to Nov. 25, 1944. "By his broad vision, professional integrity and tireless efforts in discharging the responsibilities of this important duty," said the citation, "Rear Admiral Sheldon rendered immeasurable assistance to the chief of the bureau in rapidly expanding hospital facilities within the Continental United States and at advance bases to meet the requirements of increased activities in the Navy and Marine Corps. His profound understanding and meticulous care in handling the problems of procurement and the training of medical officers, dental officers, nurses and enlisted hospital corpsmen were a distinct asset in the effective functioning of the bureau. His outstanding service in the successful fulfilment of this exacting assignment reflects the highest credit on Rear Admiral Sheldon and the United States Naval Service." Dr. Sheldon graduated from the University of Michigan Medical School, Ann Arbor, in 1909 and entered the service Feb. 1, 1911.

Captain Robert Faust

A Letter of Commendation was recently presented to Capt. Robert Faust, Wichita, Kan., "for meritorious service in the performance of his duties in the medical section, Logistics Division, on the Staff of the Commander in Chief, United States Pacific Fleet and Pacific Ocean Areas, from Jan. 17 to Sept. 1, 1945. Captain Faust displayed outstanding professional ability, sound judgment and initiative in the preparation of plans for the care and treatment of the sick and wounded, implementation of improved technics in evacuation and treatment of casualties, preparation of medical sections of operations plans and plans for and staff supervision over medical installations in connection with the development and roll up of bases. His conduct and devotion to duty were at all times in keeping with the highest traditions of the United States Naval Service." Dr. Faust graduated from the University of Kansas School of Medicine, Kansas City, in 1928 and entered the service June 28, 1928.

Captain Guy Fish

The Bronze Star was recently presented to Capt. Guy Fish, Indian Lake, N. Y. The citation accompanying the award read "For meritorious service in connection with operations against the enemy as medical officer on the staff, Commander Aircraft Central Pacific Force, Commander Forward Area Central Pacific and Commander Marianas from Jan. 20, 1944 to Sept. 22, 1945. During this period he was in a large measure responsible for the establishment, development and administration of medical facilities in the Marshall, Marianas, Western Caroline and Volcano islands. In addition, he assisted in supervising the evacuation of the wounded by aircraft and surface vessels during military operations of great importance. By his zeal, cheerfulness and outstanding professional and administrative ability he contributed materially to the success of the Central Pacific campaign. His complete devotion to duty and conduct throughout were in keeping with the highest traditions of the United States Naval Service." Dr. Fish graduated from Albany (N. Y.) Medical College in 1915 and entered the service Jan. 1, 1921.

U. S. PUBLIC HEALTH SERVICE

MEDICAL OFFICERS RELEASED OR RECOMMENDED FOR RELEASE SINCE V-J DAY

Aldrich, Napier S., Surgeon (R)
Allin, Jack G., Senior Assistant Surgeon (R)
Altland, John K., Senior Assistant Surgeon (R)
Altman, Harrie P., Senior Assistant Surgeon (R)
Apshaga, Bronie, Assistant Surgeon (R)
Armour, Paul S., Surgeon (R)
Arnett, Samuel C., Jr., Senior Assistant Surgeon (R)
Aronson, Jesse, Surgeon (R)
Askew, Julius B., Surgeon (R)
Babbitt, Clifford H., Senior Assistant Surgeon (R)
Bachman, Landon H., Senior Assistant Surgeon (R)
Ballard, Francis E. C., Senior Assistant Surgeon (R)
Barksdale, John H., Jr., Assistant Surgeon (R)
Barrett, Daniel C., Surgeon (R)
Beaton, Joseph G., Senior Assistant Surgeon (R)
Bellamy, William A., Surgeon (R)
Benning, Charles H., Surgeon (R)
Bernstein, Leo, Surgeon (R)
Bevacqua, William A., Surgeon (R)
Biggy, Robert F., Senior Assistant Surgeon (R)
Bikales, Victor W., Senior Assistant Surgeon (R)
Bobrow, Aaron, Surgeon (R)
Boltizar, Martin, Assistant Surgeon (R)
Botvinick, Isadore, Surgeon (R)
Bourg, Donald J., Senior Assistant Surgeon (R)
Bourke, John J., Senior Surgeon (R)
Bown, William C., Senior Assistant Surgeon (R)
Branscomb, Louise, Surgeon (R)
Brockman, George F., Surgeon (R)
Brooks, Glidden L., Senior Assistant Surgeon (R)
Brown, Chester P., Senior Surgeon (R)
Brown, Frank, Surgeon (R)
Brown, Henry A., Surgeon (R)
Bryan, Burton D., Senior Assistant Surgeon (R)
Buell, James, Senior Assistant Surgeon (R)
Buell, John H., Senior Assistant Surgeon (R)
Buerger, Walter R., Senior Assistant Surgeon (R)
Butterfield, Walter L., Jr., Senior Assistant Surgeon (R)
Cameron, Albert R., Surgeon (R)
Carpineto, Arthur S., Surgeon (R)
Casper, Wolfgang, Surgeon (R)
Caygill, Wayne, Senior Assistant Surgeon (R)
Chapman, Wallace, Surgeon (R)
Chernoff, Benjamin, Senior Assistant Surgeon (R)
Cherry, Robert L., Senior Surgeon (R)
Clemmons, Lowell H., Senior Assistant Surgeon (R)
Clough, William, Senior Assistant Surgeon (R)
Cook, Martin J., Senior Assistant Surgeon (R)
Costrino, Joseph A., Senior Assistant Surgeon (R)
Coughlin, Paul J., Senior Assistant Surgeon (R)
Crawford, William, Surgeon (R)
Cushman, Harry R., Surgeon (R)
Cutler, Herman S., Senior Assistant Surgeon (R)
Cutter, Edward P., Senior Assistant Surgeon (R)
D'Alecy, Louis A., Senior Assistant Surgeon (R)
Davis, James G., Assistant Surgeon (R)
Davis, Jerome G., Senior Assistant Surgeon (R)
Dennis, Melvin S., Senior Assistant Surgeon (R)
Devlin, Joseph, Senior Surgeon (R)
Devlin, Joseph T., Senior Assistant Surgeon (R)
DiMaio, Dominick J., Senior Assistant Surgeon (R)
Dobos, Emeric I., Medical Director (R)
Donath, Douglas, Surgeon (R)
Donnelly, Kenneth, Surgeon (R)
Doran, Ralph J., Surgeon (R)
Doyle, Olline B., Surgeon (R)
Drake, Ellet H., Senior Assistant Surgeon (R)
Duncan, Everett T., Surgeon (R)
Dunham, Ruth E., Senior Assistant Surgeon (R)
Dusenberry, Charles, Senior Assistant Surgeon (R)
Duston, Charles H., Senior Assistant Surgeon (R)
Dykstra, Donald, Surgeon (R)
Edlich, Theodore, Surgeon (R)
Ehrman, Frederick C., Senior Assistant Surgeon (R)
Elkind, Maurice, Surgeon (R)
Elliott, John, Senior Assistant Surgeon (R)
Emge, Ludwig A., Medical Director (R)
Enns, Eugene, Senior Assistant Surgeon (R)
Eslick, Ralph L., Senior Assistant Surgeon (R)
Eyssen, Robert E., Senior Assistant Surgeon (R)
Fagin, I. Donald, Senior Assistant Surgeon (R)
Fagman, Emanuel B., Senior Assistant Surgeon (R)
Farber, David N., Senior Assistant Surgeon (R)
Farner, Lloyd N., Surgeon (R)
Fidler, William, Senior Assistant Surgeon (R)
Fiore, Charles N., Senior Assistant Surgeon (R)
Fishbach, Robert H., Senior Assistant Surgeon (R)
Fisher, Samuel, Surgeon (R)
Flebbe, Richard, Senior Assistant Surgeon (R)
Fluke, Charles W., Senior Assistant Surgeon (R)
Foraker, Alvan G., Surgeon (R)
Forcione, Eugene A., Senior Assistant Surgeon (R)
Fouts, John D., Senior Assistant Surgeon (R)
Fowler, Hudson D., Jr., Senior Assistant Surgeon (R)
Franzblau, Abraham N., Surgeon (R)
Freeman, Robert, Senior Assistant Surgeon (R)
Frich, Michael G., Senior Assistant Surgeon (R)
Furlong, Robert D., Senior Assistant Surgeon (R)
Gammette, Evan G., Senior Assistant Surgeon (R)
Gant, James, Surgeon (R)
Gardner, James L., Senior Assistant Surgeon (R)
Gardner, Milton M., Senior Assistant Surgeon (R)
Garvin, O. David, Surgeon (R)
Gass, Royden, Senior Surgeon (R)
Gersten, Samuel, Senior Assistant Surgeon (R)
Glasscock, Ernest L., Surgeon (R)
Golino, Emanuel F., Senior Assistant Surgeon (R)
Goodhart, Robert S., Surgeon (R)
Googe, James T., Surgeon (R)
Gorrell, Ralph L., Senior Assistant Surgeon (R)
Grandmont, Irene, Senior Assistant Surgeon (R)
Graydon, Edward L., Senior Surgeon (R)
Greenblatt, Robert B., Senior Surgeon (R)
Grubin, Charles J., Senior Assistant Surgeon (R)
Hackett, Daniel C., Surgeon (R)
Hadden, Merle R., Senior Assistant Surgeon (R)
Halpern, Lawrence K., Surgeon (R)
Halter, Paul, Senior Assistant Surgeon (R)
Harvey, Oscar, Senior Assistant Surgeon (R)
Hayden, Charles G., Senior Assistant Surgeon (R)
Hayes, Frederick J., Senior Assistant Surgeon (R)
Hays, George A., Senior Surgeon (R)
Hebble, Joseph N., Surgeon (R)
Heilman, Robert, Senior Assistant Surgeon (R)
Held, David H., Surgeon (R)
Hermann, Walter L., Senior Assistant Surgeon (R)
Hershey, Thomas S., Senior Assistant Surgeon (R)
Hetreed, Francis H., Surgeon (R)
Hite, Jacob W., Senior Assistant Surgeon (R)
Hoff, Henry B., Senior Surgeon (R)
Holley, Howard L., Senior Assistant Surgeon (R)
Hollinshead, Joseph B., Surgeon (R)
Hunter, Forest C., Surgeon (R)
Hunter, James A., Jr., Senior Assistant Surgeon (R)
Hurwitz, Samuel, Senior Assistant Surgeon (R)
Jacoby, George W., Jr., Senior Assistant Surgeon (R)
James, Robert E., Senior Assistant Surgeon (R)
James, Thomas, Senior Assistant Surgeon (R)
January, Derick A., Surgeon (R)
Jeffries, Benjamin, Senior Assistant Surgeon (R)
Jewell, George M., Senior Assistant Surgeon (R)
Johnson, Carl, Senior Assistant Surgeon (R)
Kaack, Harry F., Jr., Assistant Surgeon (R)
Karp, David, Senior Assistant Surgeon (R)
Keefe, Edward, Senior Assistant Surgeon (R)
Keller, William S., Senior Surgeon (R)
Kelly, John F., Senior Assistant Surgeon (R)
Kelly, Timothy H., Surgeon (R)
Kendall, E. Worley, Surgeon (R)
Kernish, Alexander I., Surgeon (R)
Kersker, Peter B., Senior Assistant Surgeon (R)
Kile, Roy, Surgeon (R)
King, Everett A., Surgeon (R)
Kintner, Merlin Q., Senior Assistant Surgeon (R)
Kirsten, Erwin L., Surgeon (R)
Kiser, Glenn, Senior Assistant Surgeon (R)
Klein, Jack, Senior Assistant Surgeon (R)
Knupp, Wilber S., Senior Assistant Surgeon (R)
Konys, Harry C., Surgeon (R)
Korey, Saul, Senior Assistant Surgeon (R)
Kuehn, Carl, Senior Assistant Surgeon (R)
Kupper, Herbert, Senior Assistant Surgeon (R)
Kurtz, Frederick H., Senior Assistant Surgeon (R)
Lachman, Joseph, Senior Assistant Surgeon (R)

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U. S. PUBLIC HEALTH SERVICE

MEDICAL OFFICERS RELEASED OR RECOMMENDED FOR RELEASE SINCE V-J DAY

Lally, Timothy F., Senior Assistant Surgeon (R)
Langer, Sydney, Assistant Surgeon (R)
Langs, Elias W., Senior Assistant Surgeon (R)
Leavell, Hugh R., Senior Surgeon (R)
Lehr, Eric, Senior Assistant Surgeon (R)
Lemmerz, Willard H., Senior Assistant Surgeon (R)
Levin, Stanley S., Assistant Surgeon (R)
Levine, Solon J., Surgeon (R)
Lewis, John, Senior Assistant Surgeon (R)
Lich, Robert, Jr., Surgeon (R)
Lieberman, Hyman, Surgeon (R)
Light, Irving, Senior Assistant Surgeon (R)
Light, Wilbur B., Surgeon (R)
Lindquist, Paul A., Surgeon (R)
Lipton, Harry R., Surgeon (R)
Lister, George, Senior Assistant Surgeon (R)
Little, James W., Senior Assistant Surgeon (R)
Loebel, Arthur L., Assistant Surgeon (R)
Lowe, Charles R., Senior Assistant Surgeon (R)
McAuliffe, George F., Surgeon (R)
McCauley, George, Surgeon (R)
McMillen, Charles H., Jr., Surgeon (R)
Makover, Henry B., Senior Surgeon (R)
Mark, Bernard J., Senior Assistant Surgeon (R)
Marks, Harold, Surgeon (R)
Martin, Ivan E., Senior Assistant Surgeon (R)
Melton, Frank M., Senior Assistant Surgeon (R)
Messman, Harry, Surgeon (R)
Metcoff, Jack, Senior Assistant Surgeon (R)
Miglets, Andrew W., Senior Assistant Surgeon (R)
Millen, Morris H., Surgeon (R)
Miller, John W., Surgeon (R)
Milstein, David, Surgeon (R)
Monaco, Angelo R., Senior Assistant Surgeon (R)
Morgan, Thomas E., Surgeon (R)
Morris, William A., Senior Assistant Surgeon (R)
Moynihan, Arthur, Surgeon (R)
Munter, Edgar J., Surgeon (R)
Murphy, Thomas F., Surgeon (R)
Nagler, Herman J., Surgeon (R)
Needles, John W., Senior Assistant Surgeon (R)
Nesson, Willard I., Senior Assistant Surgeon (R)
Nevins, Robert, Surgeon (R)
Nichamin, Samuel J., Surgeon (R)
Nierman, M. Murray, Assistant Surgeon (R)
Norton, Russell C., Senior Assistant Surgeon (R)
Notkin, Herbert, Senior Assistant Surgeon (R)
O'Brien, James A., Surgeon (R)
Olean, Julius A., Surgeon (R)
Oliver, Robert K., Senior Assistant Surgeon (R)
Oliver, Ward L., Surgeon (R)
Oshlag, Julius A., Surgeon (R)
Ostrowski, Sigismund J., Surgeon (R)
Palmer, James L., Senior Assistant Surgeon (R)
Pariser, Harry, Surgeon (R)
Patrick, Fred E., Assistant Surgeon (R)
Peck, Harris, Senior Assistant Surgeon (R)
Pendola, Joseph J., Senior Assistant Surgeon (R)
Perkins, James E., Senior Surgeon (R)
Petrich, John M., Senior Assistant Surgeon (R)
Philips, Harry C., Surgeon (R)
Pichette, Charles E., Jr., Senior Assistant Surgeon (R)
Pickett, William H., Surgeon (R)
Podolnick, Nelson, Senior Assistant Surgeon (R)
Pogue, Jackson, Senior Assistant Surgeon (R)
Poliakoff, Harvey, Surgeon (R)
Powdermaker, Florence, Surgeon (R)
Powell, Algerd, Surgeon (R)
Prince, Leon N., Surgeon (R)
Prince, Paul, Senior Assistant Surgeon (R)
Rademacher, Everett, Surgeon (R)
Rawson, Arnold, Senior Assistant Surgeon (R)
Raymond, Bernard H., Senior Assistant Surgeon (R)
Reese, Harold J., Senior Assistant Surgeon (R)
Reilly, Walter J., Surgeon (R)
Reiter, Adolph F., Surgeon (R)
Ricca, Renato A., Assistant Surgeon (R)
Riccardi, Peter, Surgeon (R)
Riley, Joseph G., Senior Assistant Surgeon (R)
Ritter, Wayne, Surgeon (R)
Robbins, Robert M., Surgeon (R)
Root, Ralph N., Surgeon (R)
Rosenberg, David N., Assistant Surgeon (R)
Ross, Milton S., Senior Assistant Surgeon (R)
Rothermel, Robert E., Surgeon (R)
Ruch, Ralph, Surgeon (R)
Ryan, Nelson W., Surgeon (R)
Ryan, V. Gerard, Surgeon (R)
Sackren, Harry, Surgeon (R)
Saidel, Joseph W., Assistant Surgeon (R)
Samson, Ralph, Surgeon (R)
Sanker, John F., Senior Assistant Surgeon (R)
Santiago-Stevenson, Dwight, Senior Assistant Surgeon (R)
Sao Paulo, Silvio de, Senior Assistant Surgeon (R)
Sappington, Emmett E., Senior Surgeon (R)
Scagnelli, Dominick, Senior Assistant Surgeon (R)
Scarlett, William P., Surgeon (R)
Schaffer, Frank J., Assistant Surgeon (R)
Schumacher, James, Senior Assistant Surgeon (R)
Scott, Edgar M., Jr., Senior Assistant Surgeon (R)
Scoville, Dorothea H., Surgeon (R)
Seaman, Charles L., Surgeon (R)
Sharp, Clarence M., Surgeon (R)
Sherman, Jerome, Senior Assistant Surgeon (R)
Sherman, Stephen H., Senior Assistant Surgeon (R)
Shiffer, Maynard, Senior Assistant Surgeon (R)
Shiling, Moses S., Surgeon (R)
Shrop, Theodore R., Senior Assistant Surgeon (R)
Siegal, Marvin, Senior Assistant Surgeon (R)
Signer, Arthur C., Assistant Surgeon (R)
Silver, Archie A., Senior Assistant Surgeon (R)
Smith, Courtney M., Senior Surgeon (R)
Smith, Earl, Senior Assistant Surgeon (R)
Smith, Turner B., Senior Assistant Surgeon (R)
Sokolov, Raymond, Senior Assistant Surgeon (R)
Sondag, Roger F., Surgeon (R)
Sorensen, Raymond, Senior Assistant Surgeon (R)
Southworth, Hamilton, Senior Surgeon (R)
Spielholz, Jess B., Senior Assistant Surgeon (R)
Steiner, David L., Surgeon (R)
Stepita, Cornelius T., Surgeon (R)
Stokes, Lowell, Surgeon (R)
Sugg, Eugene S., Senior Assistant Surgeon (R)
Sumners, Elizabeth, Surgeon (R)
Tabershaw, Irving R., Surgeon (R)
Tauber, Hans, Assistant Surgeon (R)
Taylor, S. Harvey, Senior Surgeon (R)
Taylor, John O., Surgeon (R)
Tench, William R., Surgeon (R)
Teplick, J. George, Surgeon (R)
Thomas, Ruth Boring, Surgeon (R)
Thomson, John W., Senior Assistant Surgeon (R)
Thomson, Karl J., Surgeon (R)
Todd, William, Senior Assistant Surgeon (R)
Tomlinson, Robert W., Assistant Surgeon (R)
Tramontana, Michael, Senior Assistant Surgeon (R)
Tudor, Charles, Surgeon (R)
Twaddle, Paul H., Surgeon (R)
Tyner, Harlan H., Senior Assistant Surgeon (R)
Ury, George A., Senior Assistant Surgeon (R)
Vaccaro, Michael, Senior Assistant Surgeon (R)
Van Camp, Wesley, Senior Assistant Surgeon (R)
Walcott, William H., Surgeon (R)
Walsh, Joseph A., Senior Assistant Surgeon (R)
Weber, George F., Surgeon (R)
Weber, George W., Surgeon (R)
Weiss, Joseph G., Surgeon (R)
Weissman, I. Oscar, Surgeon (R)
Welfeld, Alvan A., Senior Assistant Surgeon (R)
Wetterstroem, Robert, Senior Assistant Surgeon (R)
Weyand, George M., Jr., Senior Assistant Surgeon (R)
White, Merritt, Surgeon (R)
Wiesel, Carl, Senior Assistant Surgeon (R)
Wilkins, Walter, Senior Surgeon (R)
Williams, Richard D., Assistant Surgeon (R)
Wilson, Russell H., Surgeon (R)
Winstead, George A., Senior Assistant Surgeon (R)
Wolf, Glenn C., Senior Assistant Surgeon (R)
Wood, Harold, Surgeon (R)
Woods, Ozro T., Senior Surgeon (R)
Woofter, Andrew C., Surgeon (R)
Worrell, James, Senior Assistant Surgeon (R)
Wyle, Irving, Surgeon (R)
Yared, Jerome A., Senior Assistant Surgeon (R)
Young, Raymond L., Senior Assistant Surgeon (R)
Zimmerman, Kent A., Senior Assistant Surgeon (R)
Zink, William L., Senior Assistant Surgeon (R)

MEDICAL OFFICERS RELEASED BY THE NAVY

NAVAL RESERVE MEDICAL OFFICERS RECOMMENDED FOR RELEASE FROM ACTIVE DUTY

Alabama

Benkwith, Karl B.....Montgomery
Hawley, George M. B. II...Birmingham
Holladay, Joel Jr.....Gadsden
Kiely, William F.....Birmingham
McCarn, Oscar C. Jr.....Warrior
McGinty Arthur P.....Birmingham
Mason, Robert J.....Birmingham
Wittmeier, James L.....Oneonta

Arizona

Kimball, Robert M.....Yuma
Kober, Leslie R.....Phoenix
Palmer, Paul V.....Phoenix

Arkansas

Barnett, James C.....Heber Springs
Dalton, Perry J.....Camden
Harper, John W.....El Dorado
Lewis, James F.....Fayateville

California

Allen, Ralph W.....Huntington Park
Bailly, Thomas E. Jr.....San Francisco
Bain, Clarence L.....Oakland
Barritt, John L.....La Jolla
Beach, Edward W.....Sacramento
Beine, William R.....Selma
Bischoff, Harold W.....San Francisco
Blatter, Robert K.....Los Angeles
Blosser, John A.....Oakland
Bogen, Emil.....Olive View
Bonar, Leland W.....San Francisco
Borley, Roswell D.....Half Moon Bay
Boscoe, Anthony R.....Sacramento
Bryant, Benjamin L.....Santa Monica
Bullis, John A. E.....Los Angeles
Burnham, DeWitt K.....San Francisco
Card, John F.....San Francisco
Carson, James G.....San Francisco
Cohn, Samuel.....San Francisco
Cook, Enos P.....San Jose
Daniels, Albert C.....Ross
Davison, Claude L.....Los Angeles
Dean, John V. B.....Santa Monica
Dickey, Clarence D.....Los Angeles
Director, William.....Los Angeles
Ducker, Howard W.....Los Angeles
Ebers, Theodore M.....Los Angeles
Fox, Ernest T.....Pasadena
Gibbons, Henry III.....San Francisco
Gobbell, Willard M.....North Hollywood
Haight, Warne L.....Coronado
Hallstone, Victor E.....Southgate
Hunt, Frederick T.....Los Angeles
Impey, Charles C.....San Francisco
Joseph, Louis.....Los Angeles
Kraushaar, Isaac N.....La Habra
Lane, Robert D.....San Jose
Larkin, John C.....Berkeley
Lebo, Charles A. P.....Redwood City
Lee, Adrian L.....Los Angeles
Ludwig, Joseph L.....Los Angeles
McBride, June P.....Los Angeles
McDermott, John C.....Los Angeles
Mantle, Verne M.....Los Angeles
Metildi, Pasquale F.....Upland
Miano, Benedict D. A.....San Bernardino
Miller, Doris L.....Vallejo
Mitchell, John A.....Oakland
Moeller, Ernst R.....Los Angeles
Olrich, Frank M.....Oakland
Pedersen, Lars A.....Berkeley
Pyle, Ross C.....San Diego
Raker, John W.....San Francisco
Rosove, Leon.....Santa Monica
Schmoele, John M.....Beverly Hills
Smith, Harry F.....San Bruno
Smith, Merle A.....Inglewood
Smith, Roy D.....San Pedro

California—Continued

Sunseri, James.....San Jose
Thompson, Arthur R.....Berkeley
Walker, Joe E.....Long Beach
Ware, James G.....Santa Barbara
Watkins, Robert P.....San Francisco
Watt, Richard H.....Los Angeles
Wessels, Arthur L.....Salinas
Whitsett, John W.....Los Angeles
Wieman, Walter H.....Los Angeles
Wilbur, Dwight L.....San Francisco
Williams, Alvin B.....San Jose
Williams, Robert N.....Ontario
Wood, Dennistoun Jr.....Palo Alto

Colorado

Brady, Emory J.....Colorado Springs
Donnelly, James E.....Trinidad
Newman, Samuel P.....Denver
Tupper, Harvey M.....Grand Junction
Weber, Clayton C.....La Junta

Connecticut

Allen, George F.....West Hartford
Conlon, William L.....Manchester
Davol, Rector T.....Greenwich
Deming, Archibald S.....West Hartford
Eddy, Maxon H.....Fairfield
Garcin, Cecil R.....Danielson
Louderbough, Henry.....Waterbury
Martin, John E. Jr.....Norwich
Rawls, Edward C.....Darien
Scully, Roger T.....New Britain
Standish, Welles A.....West Hartford
Winters, John T.....West Hartford

Delaware

Briggs, Ward W.....Wilmington

District of Columbia

Connelly, Jehue R.....Washington
Feldman, Irvin.....Washington
Ferree, John W.....Washington
Fulcher, Oscar H.....Washington
Gard, Perry W.....Washington
Gary, Edward T.....Washington
Kelley, Paul J.....Washington
Knowlton, Don S.....Washington
Ryland, Charles P.....Washington
Silverman, Carl.....Washington
Williams, Jonathan M.....Washington

Florida

Bond, Benjamin J.....N. Winter Haven
Clements, Merritt R.....Tallahassee
Ekermeyer, Ernest W.....Tallahassee
Garrard, Hollis F.....Miami
Hutson, Thomas W.....Miami
Marr, Norval M.....St. Petersburg
Oberdorfer, Aaron Z.....Jacksonville
Simmons, Eugene D.....Jacksonville
Stoddard, Spotswood D.....Fort Pierce
Totty, Edward A.....Coral Gables

Georgia

Anderson, Egbert V.....Atlanta
Burgess, Taylor S.....Atlanta
Coleman, Hubert W.....Savannah
Goodwin, Thomas W.....Augusta
Hamm, William G.....Atlanta
Holloway, George A.....Atlanta
Mitchell, William E.....Atlanta
Parker, Thomas L.....Atlanta
Terry, Daniel B.....Homerville
Walter, Robert D.....Calhoun

Idaho

Kackley, Evan M.....Soda Springs
Peterson, Willard M.....Twin Falls

Illinois

Abt, Arthur F.....Chicago
Ahroon, Carl R. Jr.....Bloomington
Andelson, Mayo M.....Chicago
Berger, Louis.....Chicago
Bernstein, Arthur.....Chicago
Brennan, John F.....Chicago
Brodt, Leonard P.....Chicago
Browne, Freeman H.....Chicago
Chapman, Morey.....Chicago
Czwalinski, Peter F.....Chicago
Davis, Jack R.....Chicago
Durburg, John R.....Chicago
Falstein, Eugene I.....Chicago
Jensen, Johannes M. L.....Chicago
Kruse, George F.....Chicago
Kweder, David J.....Waukegan
McGuire, Philip R.....Chicago
McIntosh, James R.....Bloomington
Malloy, Francis D.....Chicago
Mandernack, L. E.....Chicago
Maxwell, Sam B.....Flossmoor
May, Edwin R.....Chester
Mladick, Edward A.....Bellwood
Moberley, Paul B.....Chicago
Morris, Judson B.....Calumet City
Mrazek, Charles.....Chicago
Mueller, George R.....Chicago
O'Connell, Morgan J.....Chicago
Rideout, William E.....Freeport
Roberson, Brooks L.....Wood River
Roberts, George A.....Chicago
Schultz, Adam S.....Melrose Park
Snyder, Morris M.....Chicago
Steiner, Matthew M.....Chicago
Taylor, John B.....Carbondale
Topcik, Aaron A.....Waukegan
Trumpe, Darrell H.....Springfield
Udesky, Isadore C.....Chicago
Verneuil, Julius J.....Collinsville
Wagner, Ben E.....Riverside
Waldo, Proctor C.....Oak Park
West, Robert H.....Evanston
Whitaker, Walter M.....Quincy
Wilson, Finis E.....Highland
Wippern, Virgil.....Chicago

Indiana

Hammond, Stanley M.....Indianapolis
Herbst, Robert R.....Hammond
Holland, Phillip T.....Bloomington
Kinneman, Robert E.....Greenfield
Row, Dunn H.....Indianapolis
Sovine, Joe W.....Indianapolis
Williams, Aubrey H.....Fort Wayne
Williams, Francis M. Jr.....Pendleton

Iowa

Bird, Raymond G.....Clarion
Glasscock, Thomas C.....Hawarden
Glesne, Otto N.....Fort Dodge
Hansen, Fred A.....Red Oak
Lage, Raleigh H.....Earlville
McFarland, Guy E. Jr.....Ames
Randall, William L.....Hampton
Rieniets, John H.....Cedar Rapids
Rose, Joseph E.....Grundy Center
Wolfe, Russell M.....Marshalltown

Kansas

Clark, Porter M.....Independence
Eckles, Lucius E.....Topeka
Haus, Loren W.....Turner
Orr, Richard E.....Hutchinson
Price, Vaughan C.....McPherson
Rich, William T.....Neodesha
Ward, Delbert A.....Arkansas City

Kentucky

Coldiron, John C.....Hazard
Maxson, William T.....Lexington
Worthington, Wm. N.....Ashland

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MEDICAL OFFICERS RELEASED BY THE NAVY

Louisiana

Bennett, William H. ..... Metairie
Coffel, Melvin H. ..... Shreveport
Culpepper, Walter S. ..... New Orleans
Hanley, Patrick H. ..... New Orleans
Kelly, Edward F. ..... New Orleans
Lyons, Shirley C. ..... New Orleans
Robins, Irvine A. ..... Baton Rouge

Maine

Almond, Henry ..... Portland
Caswell, John A. ..... Belfast
Guy, John T. ..... South Eliot
Ives, Howard R. ..... Portland
Jackson, Norman M. ..... Rumford
Jones, Paul A. ..... Union

Maryland

Bruenn, Howard G. ..... Rockville
Dorman, John W. Jr. ..... Baltimore
Hunter, James S. Jr. ..... Frostburg
Kemp, Simon I. ..... Peksville
Lehman, William L. ..... Bethesda
McLaughlin, Donald C. ..... Baltimore
Martin, James R. ..... Annapolis
Miller, William S. ..... Baltimore
Moulton, Olin C. ..... Salisbury
Queen, Greenville B. ..... Takoma Park
Tucker, Walter I. ..... Pikesville
Wells, Gibson J. ..... Baltimore
Whitaker, Charles S. ..... Clarksville
Williams, Richard T. ..... Laurel
Zeligman, Israel ..... Baltimore

Massachusetts

Atkinson, Gordon D. ..... Malden
Baker, Robert H. ..... Worcester
Barker, Robert H. ..... Brookline
Berman, Marcus W. ..... Roslindale
Boyd, Kenneth T. ..... Haverhill
Burke, John A. ..... Hyde Park
Burrage, Walter S. ..... Brookline
Caradonna, Henry ..... Worcester
Carey, Edmund I. ..... Quincy
Carpenter, Frederick J. ..... Pittsfield
Clapp, William B. ..... North Grafton
Collins, John F. ..... Winthrop
Compson, James E. ..... Boston
Conway, Christopher C. ..... Milton
Devlin, Thomas P. ..... Stoneham
Dinan, Thomas E. ..... Framingham
Dixey, Grant M. ..... Salem
Dodge, Donald T. ..... Arlington
Dwight, Richard W. ..... Brookline
Dynes, John B. ..... Boston
Elder, Burton F. ..... Hingham
Finn, Herbert G. ..... Lynnfield
Franz, Adolph Jr. ..... Holyoke
Gates, Donald C. ..... Boston
Gowen, Willis M. ..... Melrose
Kennedy, James M. Jr. ..... Pittsfield
King, Charles V. ..... Worcester
Lent, James W. ..... Newton Center
Lilyestrom, Sanfrey M. ..... Worcester
McCarty, Raymond A. ..... Waltham
Magnette, Jules Jr. ..... Cambridge
Murphy, Lawrence J. ..... Milton
Norcross, John W. ..... Milton
Norton, Hermon ..... Waban
O'Brien, Joseph V. ..... Dorchester
Regan, James J. ..... Boston
Reed, John F. ..... Rockport
Rudd, Jacob L. ..... Cambridge
Russo, Anthony R. ..... Somerville
Sise, Herbert S. ..... Brookline
Smith, Jacob ..... Medford
Stratton, Charles W. Jr. ..... Lee
Toombs, Herbert R. ..... Westfield
Webster, Earle H. ..... Bridgewater
White, James C. ..... Boston
Williams, Walter W. ..... Springfield

Michigan

Bergo, Howard L. ..... Detroit
Bovill, Edwin G. ..... Grosse Pointe
Gass, Herman H. ..... Ann Arbor
Gezon, Horace M. ..... Grand Rapids
Miller, Maurice J. ..... Auburn
Nickels, Mervyn M. ..... Traverse City
Norconk, Alonzo A. ..... Detroit
Robson, Edmund J. ..... East Lansing
Savignac, Eugene M. ..... Dearborn
Scarney, Herman D. ..... Detroit
Shanoski, Stanley J. ..... Detroit
Shapiro, Reuben I. ..... Detroit
Shellman, Millard W. ..... Grand Rapids
Smith, John A. ..... Detroit
Stadle, Wendell H. ..... Battle Creek
Stevens, Charles H. ..... Detroit
Stiles, Frank Jr. ..... East Lansing
Westcott, Royal J. ..... Baraga
Yott, William J. ..... Detroit

Minnesota

Anderson, John T. ..... Montevideo
Arling, Philip A. ..... Chicago City
Ballou, Hosea C. ..... Rochester
Bakkila, Henry E. ..... Duluth
Boynton, Bruce ..... Duluth
Colp, Edward A. ..... Robbinsdale
Craig, Winchell M. ..... Rochester
Doyle, Leo W. Jr. ..... Rochester
Holzapfel, Frederick C. ..... Minneapolis
Jolin, Raymond V. ..... Grand Rapids
Kingston, James R. ..... Coleraine
Knutson, George O. ..... Greenbush
Kraemer, George N. ..... Minneapolis
Lane, Robert E. ..... St. Paul
Larsen, Frank W. ..... Minneapolis
Marvin, Charles P. ..... St. Paul
Morrison, William F. ..... Minneapolis
Olsen, Ralph L. ..... St. Paul
Virnig, Mark P. ..... Wells

Mississippi

Butler, Frank L. Jr. ..... McComb
Robinson, Burton L. ..... Meridian
Townsend, George G. ..... Morton

Missouri

Bailey, Sidney M. ..... Malden
Bromberg, Leon ..... St. Louis
Biggs, Fred J. Jr. ..... Neelyville
Craig, Irwin T. ..... Joplin
Davis, George W. Jr. ..... Kansas City
Danglade, James H. ..... Kansas City
Harsh, Ralph T. ..... St. Louis
Howard, John C. Jr. ..... Kansas City
Jost, Charles A. ..... St. Louis
Kent, Edward M. ..... St. Louis
Klein, Andrew G. ..... St. Louis
McClanahan, Robert C. ..... Kansas City
Saunders, George M. ..... St. Louis
Stauffer, Maurice H. ..... Kansas City

Montana

Knierim, Frederick M. ..... Glasgow
Walker, Robert E. ..... Livingstone

Nebraska

Burdick, Donald E. ..... David City
Graham, Joseph E. ..... Omaha
McGrath, William M. ..... Grand Island
Peterson, John C. ..... Lincoln
Peterson, Paul L. ..... Broken Bow
Taylor, Willis H. Jr. ..... Omaha
Vroman, Donald C. ..... Omaha
Wiley, Clare C. ..... Imperial

Nevada

Harper, Twyman C. ..... Reno
Valenta, Henry J. ..... Reno

New Hampshire

Chamberlin, Eugene F. ..... Hillsboro
Messinger, Herbert B. ..... Franklin

New Jersey

Allen, James M. ..... Passaic
Armour, William S. ..... Madison
Barnett, Robert W. ..... Newark
Bayer, Harold J. ..... Atlantic City
Becker, George L. ..... Paterson
Becker, Marvin C. ..... Newark
Behr, Irving S. ..... Weehawken
Bew, Richard C. ..... Brigantine
Blake, Dexter B. ..... Montclair
Booth, Walter S. ..... Elizabeth
Bornemann, Carl ..... Montclair
Borshaw, Hyman ..... Jersey City
Boyer, Paul K. ..... Summitt
Bruning, Richard H. ..... Maplewood
Buchanan, Ralph M. L. ..... Phillipsburg
Burkett, John P. ..... Woodbury
Caggiano, Anthony P. ..... Montclair
Carroll, Thomas R. ..... Cliffside Park
Cassell, Arnold ..... Bayonee
Chapman, Walter I. Jr. ..... Bayonne
Charleroy, Durant K. ..... Bordentown
Citret, Coleman ..... Newark
Clark, Paul M. ..... Long Branch
Clement, John B. ..... Beverly
Clinton, Joseph A. ..... Newark
Conserva, Peter V. ..... Clifton
Cook, Homer E. ..... Somerville
Davidson, Eric W. ..... Verona
Davison, Charles S. ..... Salem
Dawson, Harry ..... Paterson
Delafrange, Kenneth M. ..... Vineland
Dempsey, John H. ..... Berlin
DePalma, Anthony F. ..... Orange
Donnelly, William A. ..... Atlantic City
Dunn, Theodore B. ..... Bloomfield
Durham, Robert B. ..... Ventnor
Evans, John R. Jr. ..... South Orange
Fitch, Thomas S. P. ..... Plainfield
Gallo, James S. ..... Paterson
Gorenberg, Harold ..... Jersey City
Green, Martin ..... Princeton
Grenhart, George W. ..... Merchantville
Hauptman, Harry ..... Jersey City
Heaton, Stuart C. ..... Elizabeth
Hennig, George C. ..... Englewood
Henry, Walter J. ..... Hoboken
Hesseltine, Clare E. ..... Freehold
Hiler, Stuart A. ..... Rockaway
Hughes, James W. Jr. ..... Atlantic City
Humbert, Joseph C. ..... Stewartsville
Hutner, Cyril I. ..... Woodbridge
Imbleau, Joseph E. L. ..... Union
Johnson, Winton H. ..... Andover
Kennedy, Andrew A. ..... Paterson
Kessler, Henry H. ..... Newark
Koeck, George P. ..... Newark
Laauwe, Harold W. ..... Paterson
Lang, Richard E. ..... South Amboy
Landesman, William ..... Kearny
Lazow, Sollon M. ..... Mattawan
McCarthy, George L. ..... Paterson
McCroskery, Hamilton W. ..... East Orange
Maclaren, Philip J. ..... Westwood
Marlett, Neumann C. ..... Belvidere
Maroney, James H. ..... Summitt
Martin, Franklin Jr. ..... S. Orange
Marts, George H. ..... Plainfield
Mechanik, Harvey K. ..... Plainsfield
Meyers, Francis R. ..... Paterson
Mohair, John P. ..... Dover
Moister, Frank C. ..... Summitt
O'Grady, Michael J. ..... Millburn
Perrine, Cornelius C. ..... Fair Haven
Peters, Richard C. ..... Plainfield
Pizzi, Francis W. ..... Orange
Polow, Benjamin ..... West Orange
Rubenstein, Robert ..... Jersey City
Ruocco, William B. ..... Paterson
Schwarzfeld, Howard K. ..... Newark
Sexton, Edward V. ..... Tenneck
Sickel, Emanuel M. ..... Lakewood
Sullivan, William T. ..... Belleville
Taranto, Michael ..... Linden

MEDICAL OFFICERS RELEASED BY THE NAVY

New Jersey—Continued

Tollefson, George A.....Bronx
Van Winkle, Charles I.....Rutherford
Volpe, Donald J.....Hammontown
Wesson, Harrison R....Upper Montclair
West, David H.....Collingwood
Wikler, Louis A.....Margate
Wilson, John H. Jr.....West Orange
Zacchino, Arnold A.....Palisade
Wyman, Edward H.....Burlington

New York

Allen, Edward R.....Cortland
Avallone, Louis A.....Lowville
Babbage, Edwin D.....Buffalo
Backus, Leslie H.....Gloversville
Barbieri, Vito Jr....Hastings-on-Hudson
Barnes, Frank E., Jr.....Auburn
Barnett, James C.....Rockaway, L. I.
Barone, George H.....Lockport
Barrett, James V.....Troy
Bartholomew, Herbert A....Glens Falls
Bates, Edgar H.....New York
Beard, James R. Jr.....New York
Bell, Edward G. Jr.....Bronxville
Berry, Reginald V.....Bangall
Bessie, Everett M.....New York
Bianco, Anthony A.....New York
Bigger, Ralph W.....New York
Bond, Frederick T.....Brooklyn
Boyd, Luke H.....Bemus Point
Brady, John C.....Newburgh
Brady, Warren R....Brightwaters, L. I.
Brett, Wilbur B.....New York
Bromberg, Norbert.....New York
Brown, DeWitt C.....Jamaica
Brown, Herbert R. Jr.....Rochester
Brown, John J.....Bellerose, L. I.
Brush, John M.....New York
Burk, Samuel B.....New York
Cahill, Daniel P.....Ozone Park, L. I.
Carpenter, Alvin R.....Binghamton
Cheever, Francis S.....New York
Childs, David W.....Amsterdam
Coburn, Alvin F.....Bedford Village
Cole, James P.....Buffalo
Cox, John.....Jamaica
Cramp, George W.....Brooklyn
Crawley, Charles J.....Brooklyn
Cupaiuoli, Richard A.....New York
Currie, Robert A. Jr.....Lysander
Daniels, Francis R.....Rochester
Deddish, Michael R.....New York
Degenhardt, H. J...Jackson Heights, L. I.
Dennison, Alfred D.....Gloversville
Dingman, James A.....Spring Valley
Doran, Robert E.....Geneva
Dorr, William L.....Auburn
Dougherty, Charles E.....New Rochelle
Douglas, Albert H. R.....Jamaica, L. I.
Dudley, Henry G.....Brooklyn
Farber, Raphael.....Rochester
Farrow, Franklin C.....Buffalo
Farrow, Joseph H.....New York
Fearon, Henry D.....Brooklyn
Feltman, William.....Albany
Fertig, David.....Scarsdale
Fischbach, Karl.....New York
Fitzgerald, John S.....Utica
Fitzgerald, Thomas M.....Brooklyn
Flynn, Jerome B.....New York
Foote, Lewis D.....Staten Island
Franks, Myron B.....Rochester
Freeman, Jules.....New York
Freeman, Rowland G. Jr.....New York
Friedman, Benjamin.....New York
Frieri, Anthony F. X.....Brooklyn
Fuchs, John H.....Richmond Hill, L. I.
Gardstein, Henry F.....Brooklyn
Garnett, Herman M.....Long Island
Gastal, Joseph S.....Brooklyn
Gephert, John R.....New York
Ginsberg, Harry.....Brooklyn
Glynn, Martin Z.....New York

New York—Continued

Goodman, Edmund N.....New York
Gosselin, Raymond.....New York
Grand, Milton J. H.....New York
Greenberg, Samuel U.....New York
Greene, Gerald S.....New York
Greene, Irving.....New York
Greenstein, Nathan M.....Bronx
Gunther, Roy W.....Amsterdam
Hackett, Henry C.....Portville
Halperin, Meyer A.....Brooklyn
Hamel, John H. Jr.....Syracuse
Hanson, Harry A.....Rochester
Harrigan, Gerald B.....Great Neck
Harris, Joseph H.....New York
Harris, Robert W.....Williamson
Havill, William H.....Auburn
Heenan, John T.....Bronx
Helmick, Perry I.....New York
Henderson, Allen W.....Dexter
Heroy, William W.....New York
Hodas, Joseph H.....Jackson Hts.
Holzwarth, Franklin E.....Rochester
Hook, Donald W.....Rochester
Horwich, Ivor D.....Flushing
Howard, Campbell.....New York
Jaffe, Harry L.....New York
Jenkins, Judson H.....Massapequa
Jones, Herbert M.....Auburn
Jones, Richard L.....Glen Cove
Kane, Frank P.....Binghampton
Kanof, Abram.....Brooklyn
Kayfetz, Daniel O.....New York
Kazmann, Harold A.....New York
Keet, Ernest E. Jr...Queens Village, L. I.
Kenyon, Byron B.....Bronxville
Klein, Leonard.....New York
Kline, Paul R.....New York
Klinger, Milton E.....Jamaica, L. I.
Knox, Nicholas A.....Bellaire
Krainin, Philip.....New York
Kuskin, Lawrence.....Brooklyn
La Barba, Peter J.....Brooklyn
Lamont, Charles S.....Poughkeepsie
Langman, Louis.....New York
La Raja, Raymond J.....Brooklyn
Larrabee, John H.....Johnstown
Lawrence, Andrew W.....Sea Cliff
Lee, Willard J.....Garden City, L. I.
Lenzner, Abraham S.....Buffalo
Leone, Vincent D.....Niagara Falls
Libby, Nathan.....New York
Lill, Nicholas D.....Dolgeville
Lohnes, James T. Jr.....Troy
Lonergan, Francis J.....Homer
Lucas, Alfred W.....Hornell
Lytle, Theodore L.....Dunkirk
McAmmond, John F.....Rochester
McCann, Walter J.....New York
McGarvey, David F.....Rochester
McGrattan, Victor T.....Elmhurst, L. I.
McManus, James W.....Brooklyn
Maloney, William E.....Buffalo
Manning, Donald J.....Brooklyn
Mastrota, James A.....Brooklyn
Meredith, William C.....New Rochelle
Merrill, Elmer F.....New York
Mersheimer, Walter L.....Tuckahoe
Merwarth, Harold R.....Brooklyn
Meyer, Theodore R....Sag Harbor, L. I.
Mitchell, Francis V.....Brooklyn
Moore, Donald E.....Syracuse
Morse, Carter R.....Tupper Lake
Murphy, Alvin E.....New Brighton, L. I.
Murphy, Michael J.....Brooklyn
Myers, John R.....DeWitt
Neely, Hugh.....Hastings-on-Hudson
Nettles, Mark K.....Schenectady
Nichols, Frank C.....Sea Cliff
Northway-Meyer, Robert.....Middletown
O'Connell, Clintor P.....New York
O'Connor, John E.....New York
O'Neill, Laurence D.....Central Islip
Palmer, Lauchlen S.....Willard

New York—Continued

Pascale, Albert J.....Brooklyn
Peterson, Gerald M.....New York
Pippitt, Richard B.....Port Jervis
Platt, John W.....Poughkeepsie
Pulver, Fred H.....Schenectady
Quinlan, Daniel E.....Brooklyn
Rachun, Alexius.....Whitestone, L. I.
Rakov, Harold L.....Kingston
Reich, Harry L.....Brooklyn
Rhame, Harold E.....Brooklyn
Rodin, Melvin.....Brooklyn
Roe, Leon M.....Canisteo
Rooney, James B.....Nyack
Rosen, James M.....New York
Rosenberg, Alexander E.....New York
Rubin, Elias.....Jamaica
Ruesch, Alfred S.....Great Neck
Sabatini, William A.....Bronx
Sansone, Francis X.....Bronx
Saxl, Newton T.....New York
Saxton, Harold H.....Mayville
Schlosberg, Stanley S.....New York
Schneierson, Samuel J.....New York
Schor, Irving M.....Brooklyn
Schorr, Richard.....Yonkers
Scotti, Dominick W.....New York
Seelig, Charles A.....Jackson Heights
Seligmann, Arthur W. Jr....New York
Shepard, Edward M.....New York
Sheppard, Wm. B.....New York
Siris, Joseph H.....Kew Gardens, L. I.
Slocum, Milton J.....New York
Smith, Dean D.....Binghamton
Smith, Edward W.....New Rochelle
Smith, Kenneth F.....Millbrook
Smith, Robert W.....Chenango Bridge
Solley, Robert F.....New York
Spingarn, Clifford L.....Brooklyn
Steele, John M.....New York
Steinberg, Israel.....Larchmont
Stockton, Robert S.....Buffalo
Sullivan, William J.....Moravia
Sumers, John.....New York
Sutherland, Arthur M.....White Plains
Szymanski, Frederick J.....Rochester
Terman, Irving.....New York
Terry, Giles S.....Scarsdale
Vadney, Claude H.....Utica
Van Ness, Albert W.....Syracuse
Vitolo, Ralph E.....South Brooklyn
Walsh, John D.....Brooklyn
Watson, Paul H.....Newburgh
Westinghouse, Walter D.....Buffalo
Wildman, Henry V.....New York
Witt, Joseph J.....Utica
Woodman, Ernest L. Jr.....New York

North Carolina

Parrott, John A.....Kinston
Sherman, Claude P.....Goldsboro
Wharton, Charles W.....Smithfield
Worley, James H.....Shaeville

Ohio

Barkman, Floyd J.....Wyoming
Boehler, Clement C.....Rocky River
Browning, Joseph A.....Moscow
Christman, Herbert E.....Lakewood
Conry, Erwin L.....Cleveland
Elliott, Philip H.....Zanesville
Kearney, John J.....Piqua
King, Clair B.....Canton
Kobacker, J. Lester.....Toledo
Kurzner, Meyer.....Cincinnati
LaValle, Joseph C. E.....Cincinnati
McDonald, Andrew W.....Cadiz
Macumber, Harold H.....Ironton
Marsh, Charles W. Jr....East Cleveland
Maxwell, Joseph A.....Columbus
Perrine, Geo. B.....Cincinnati
Pfarrer, Richard A.....Dayton
Reading, Robert A.....Shaker Heights
Reed, Howard W.....Akron

MEDICAL OFFICERS RELEASED BY THE NAVY

Ohio—Continued

Robishaw, Arthur W.....Elyria
Rusin, Conrad T.....Lorain
Schneider, Richard V.....Toledo
Sidenberg, Stanley S.....Cleveland
Smith, Robert G.....Columbus
Snow, Lee B.....Portsmouth
Solier, Richard W.....Bryan
Spreen, Arthur H.....Cincinnati
Torrence, Elmer R.....Troy
Warburton, Ralph T.....North Canton
Whitacre, Halford E.....Bowling Green
Woldman, Victor F.....Shaker Heights
Yordy, Paul L.....Dayton

Oklahoma

Deupree, Harry L.....Oklahoma City
Peters, James C.....Pawnee
Pigford, Russell C.....Tulsa

Oregon

Anderson, Nels P. E.....Eugene
Blatchford, Roderick C.....Portland
Hawroth, Wallace.....Portland
Romig, Ronald C.....Eugene

Pennsylvania

Battle, John D. Jr.....Haverford
Bodine, Francis S.....Kane
Boucher, Irvan A.....Tyrone
Bozzi, Carmel J.....Philadelphia
Brittingham, John T.....Philadelphia
Brundage, John T.....Moscow
Burrows, James H.....Williamsport
Bushyager, Ronald R.....Irwin
Butt, Hugh R.....York
Calhoun, Hugh H.....Bryn Mawr
Casillo, August V.....Pittsburgh
Cava, Joseph J.....Philadelphia
Chapple, Charles C.....Philadelphia
Clay, Joseph V. F. Jr.....Bryn Mawr
Cole, Richard S.....Greensburg
Cornelius, Chalmers E.....Jenkintown
Courtney, John J.....Ardmore
Crooks, Philip E.....Patton
Crothers, Wesley G.....Chester
Dengler, Ernest H.....Pottstown
De Orsay, Ralph H.....Drexel Hill
De Quevedo, Nestor E.....Factoryville
Dickinson, Everett H.....Philadelphia
Dilco, Luscian W.....Allentown
Donaldson, Robert D.....Kane
Dragan, George A.....Clairton
Dunbar, William.....Philadelphia
Dunn, James W.....Clifton Heights
Dyson, William L.....Hazelton
Eaton, Hamblen C.....Harrisburg
Fogel, Ernest J.....Windber
Follweiler, Robert A.....Tamaqua
Gadd, Howard W.....Monongahela
Gambescia, Pasquale J. C.....Philadelphia
Gibson, William E.....Pittsburgh
Gibbons, John P.....Plains
Gill, John J.....Wilkes-Barre
Giordano, Hamlet R.....Bristol
Glassburn, John R.....Wilkinsburg
Glauser, Frank.....Philadelphia
Grace, James J.....Montrose
Graham, Marshall W.....Washington
Geigle, Carl F.....Philadelphia
Hannen, Allen J.....Williamsport
Harveson, Theodore K.....Philadelphia
Heller, Henry K.....Bethlehem
Hobbs, Wayne.....Philadelphia
Hoffa, John A.....Ambler
Horwitz, Orville.....Haverford
Howell, William M.....Avoca
Hughes, Joseph P.....Monongahela
Hunt, Albert R.....Wayne
Hunt, William R.....Duquesne
Hutchison, Lloyd S.....Lancaster
Jacox, Harold W.....Pittsburgh
Jaffe, Beryl.....Philadelphia
James, Paul M.....Ardmore

Pennsylvania—Continued

Jarvis, Frederick W.....Philadelphia
Jones, Charles P.....South Forth
Jones, Hubert N.....Wilkes-Barre
Jones, John W.....Pottsville
Jones, Donald T.....Media
Johnson, Samuel H. III.....Pittsburgh
Kidd, John M.....Mifflintown
Kirchhofer, Lewis H.....Penfield
Kline, David W.....Philadelphia
Korns, Miller J.....Somerset
Kressler, Robert J.....Philadelphia
Lang, Leonard P.....Philadelphia
Larsen, Erling N.....DuBois
Lear, Benjamin F.....Vandergrift
Levine, Arnold S.....Merion
Lewis, David E.....Scranton
Lomax, Joseph.....Philadelphia
Longaker, George M. Jr.....Pottstown
McCombs, Robert P.....Jenkintown
Malley, William L.....Pittsburgh
Marquis, Robert A.....Monaca
Matys, Edmund V.....Dupont
Meanor, Harold H. Jr.....Coraopolis
Mengel, Sterling F.....Schuylkill Haven
Mohan, John Q.....Philadelphia
Montgomery, Bruce.....Fairchance
Myers, William A.....York
Nettrour, Walter S.....Pittsburgh
Novatney, Raymond C.....Springfield
Olsen, Axel K.....Sayre
Orr, Theodore E.....Media
Patton, Thomas B.....Philadelphia
Penny, George E.....Ardmore
Perry, Samuel W. Jr.....New Castle
Perry, Solomon P.....Sayre
Pokrass, Frederick P.....Reading
Porreca, George A.....Philadelphia
Pratt, John W. II.....Coatesville
Ramsey, Frank M. Jr.....Chestnut Hill
Ramsey, William B. II.....Bryn Mawr
Rebbeck, Elmer W.....Pittsburgh
Renz, Millard F.....Erie
Rome, Howard P.....Philadelphia
Rosenthal, Alexander H.....Waston
Runk, Lorenzo G. Jr.....Philipsburg
Sarni, Caesar F.....Pottstown
Schmid, William A.....Washington
Schwalm, Leslie J.....Pottsville
Scott, James C.....Berwyn
Scott, Joseph W.....Roscoe
Shapiro, Robert.....Philadelphia
Shaughnessy, Wm. J.....Kingston
Shelton, Joseph M.....Washington
Shoemakee, Robert III.....Hatboro
Shugert, Guy S.....Wampum
Speer, Andrew B.....Pittsburgh
Sprague, David W.....Pittsburgh
Straub, Charles W.....Middleburg
Trachtenberg, Harry B.....Philadelphia
Tucker, Thomas W.....Spring City
Turville, Charles S.....Drexel Hill
Uhle, Charles A. W.....Whitemarsh
Weikel, John G.....Belleforte
Weissbach, Wm. H. Jr.....Pittsburgh
Westfall, Wilbur W.....Somerset
Willard, John H.....Philadelphia
Williams, Lewis D.....Plymouth
Yahraus, Jack L.....Bentleyville

Tennessee

Bell, Spencer Y.....Knoxville
Eberhart, John J.....Nashville
Johnson, George S.....Nashville
Young, Thomas K. Jr.....Memphis
Womack, Frank C. Jr.....Nashville

Texas

Baker, Edmund F.....Ennis
Barnes, George B.....Trinity
Barnett, John L.....San Antonio
Bradford, Francis K.....Houston
Brindley, Claunch G.....Kingsville
Brumfield, Fred O.....San Antonio

Texas—Continued

Chaney, Clyde E.....Eastland
Cline, William B. Jr.....Corpus Christi
Cox, Emelious A. Jr.....Brenham
Coyle, Edward W.....San Antonio
Donaghey, Charles J.....Trenton
Downs, Seth R.....Kilgore
Draper, Leonidas Mc.....Borger
Flack, Julius V.....Dickinson
Henry, Albert C. Jr.....Smithville
Holt, Jordan O. S. Jr.....Dallas
Gardner, Robert A.....Houston
Jinkins, Wiley J. Jr.....Galveston
Keene, Albert H.....Dallas
Knapp, Roger S.....Arkansas Pass
Lockhart, Jesse C.....Goose Creek
Luedemann, Waldo S.....San Antonio
Mast, Henrie E.....Lubbock
Mathis, Alvin L.....Austin
Mills, James T.....Dallas
Mitchell, Archie L.....Marshall
Mitchell, Douglas G.....Fort Worth
Parr, Luther H.....Houston
Richardson, James K.....Sweetwater
Richardson, Oswald J.....Allison
Rose, John A.....Houston
Simmons, Daniel C.....Kilgore
Taylor, William C. Jr.....Calvert
Williams, Edward S.....Lubbock
Williams, Jesse B.....Seguin

Virginia

Barksdale, Lee S.....Hopewell
Cole, Edward L. Jr.....Charlottesville
Cornlund, Philip R.....Norton
Crandall, Wm. D.....Alexandria
Finch, Frederick L.....Richmond
Gillespie, Barnes.....Hilton Village
Gordon, Marshall P. Jr.....Richmond
Haas, John P.....Norfolk
Hamilton, John R.....Nassawadox
Lee, Claude M. Jr.....Charlottesville
Milchin, Sam N.....Richmond
Moorman, Elmer R.....Kilmarnock
Morrison, Frederick M.....Lynchburg
Nemuth, Harold I.....Portsmouth
Phillips, Paul L.....Norfolk
Pringos, Andrew A.....Petersburg
Proffitt, John A.....Richmond
Rawls, Japheth E. Jr.....Suffolk
Riley, Chester L.....Winchester
Roode, Albert G.....Bedford
Smoot, John L.....Richmond
Taylor, Francis N.....Petersburg
Vaughan, George D. Jr.....Richmond
Westcott, Henry H.....Roanoke
White, Matthew J. W. Jr.....Luray
Whitman, William R. Jr.....Roanoke
Williams, Ennion S.....Richmond
Williams, Robert.....Norfolk
Woodward, Lewis K. Jr.....Front Royal
Wornal, Lacey S.....Richmond
Yates, Harold T.....Charlottesville

Washington

Benson, Reuben A.....Bremerton
Brilhart, Kenneth B.....Seattle
Chase, Edwin B.....Everett
Clancy, John.....Townsend
Coglon, Roger B.....Yakima
Friend, Austin G.....Seattle
Hanks, Thrift G.....Seattle
Harris, Waldo E.....Spokane
Harvey, Fred C.....Spokane
Haven, Hale A.....Seattle
Hennings, Francis W.....Tacoma
Kretz, Alexander W.....Hoquiam
Lackie, Lloyd F.....Seattle
Leavitt, Harry L.....Seattle
Lynch, Herbert C.....Yakima
McCoy, Kenneth M.....Spokane
O'Hare, John F.....Mercer Island
Shaw, Joseph W.....Seattle

PHYSICIANS SEPARATED FROM SERVICE

ARMY MEDICAL CORPS OFFICERS RECOMMENDED FOR OR RELIEVED FROM ACTIVE DUTY

Alabama

Barnes, Justus M., Lt. Col., 18 Wilson St., Montgomery.
Bibb, Robert C., Capt., 515 Locust St., Huntsville.
Blake, William A., Capt., 1958 St. Stephens Rd., Mobile.
Cherry, Alfred, Major, 2430 11th Ave., North Birmingham.
Johnson, George L., Lt. Col., Vet. Adm. Facility, Tuscaloosa.
Lewis, Arthur N., Lt. Col., 800 St. Anthony St., Mobile.
Little, Joe H., Lt. Col., 2309 Wilson Ave., Mobile.
Manasco, Hobson, Capt., Carbon Hill.
Owsley, Lawrence H., Capt., Eclectic.
Russell, Paul T., Capt., Burchfield Hotel, Tuscaloosa.
Silberman, Donald J., Capt., 928 Linwood Rd., Birmingham.
Snoddy, William T. Jr., Capt., 1724 31st Ave. N., Birmingham.
Snow, James S., Major, 2620 11th Ave., S., Birmingham.
Thomas, Benjamin F., Major, 114 S. Gary St., Auburn.
Varner, William D., Capt., 209 N. 9th St., Opelika.

Arizona

Bregman, Edward H., Capt., Box 452, Tombstone.
Lewis, Reinhard B., Capt., Copper Queen Hos., Bisbee.
Thompson, Harry E., Capt., 1005 Valley Nat. Bldg., Tucson.

Arkansas

Adair, Thomas L., Capt., Bald Knob.
Eldridge, John E., Capt., 608 N. Forrest St., Forrest City.
Ellis, Jack R., 1st Lt., 130 Hobson Ave., Hot Springs.
Harris, Charles P., Capt., 1315 Main St., Jonesboro.
Nixon, Ewing M., Capt., 1008 Danaghey Bldg., Little Rock.
Shearer, William F., Capt., 4316 S. Lookout St., Little Rock.
Washburn, A. M., Lt. Col., 5501 Sherwood Rd., Little Rock.

California

Alsberge, Marden A., Major, 1420 Glenwood Road, Glendale.
Alward, Harold C., Major, 838 5th Ave., Los Angeles.
Austin, John H., Capt., 276 W. College St., Covina.
Balch, Harry E., Capt., 337 N. Monterey, Alhambra.
Ballou, William W., 1st Lt., 3840 Sherman Way, Sacramento.
Barnard, James F., Lt. Col., 9259 Magnolia Ave., Arlington.
Barnes, Myron C., Major, 125 West F St., Ontario.
Bennetts, Frederick A., Major, 846½ S. Plymouth, Los Angeles.
Blackmun, Ernest L., Capt., 1561 W. Walnut St., Stockton.
Blackmun, Robert L., 1st Lt., 3225 Lowry Road, Los Angeles.
Bobbitt, James R., Capt., 777 Old Mill Rd., Pasadena.
Boim, Leon, Capt., 1543 Market St., Redding.
Bray, Olin D., Capt., 1366 Boston St., Altadena.
Briggs, John D., Major, Weaverville.
Bullock, Lewis T., Major, 1136 W. 6th St., Los Angeles.
Burleson, Ferris C., Capt., San Jose Hosp., San Jose.
Burns, Robert A., Capt., Woodland Clinic, Woodland.
Castiglione, John B., Capt., 966 Randolph St., San Francisco.
Chinn, Silas, Capt., 1050 Washington St., San Francisco.
Christian, Sam G., Major, 1801 Third Avenue, Sacramento.
Cohn, Herbert J., Lt. Col., 283 28th Avenue, San Francisco.
Comparette, Homer L., Major, Rancho Los Amigos, Hondo.
Cooley, Fred E. Jr., Capt., 205 Alta Ave., Dinuba.
Coshow, George H., Capt., 1007 Valecito Rd., Carpinteria.
Davis, Fred J. Jr., 1st Lt., 920 Pine St., Susanville.
Dixon, William B., Capt., 11035½ Strathmore Dr., Los Angeles.
Dorcy, Laurence H., Major, 2315 Washington, San Francisco.
Edmeades, Donald T., Capt., 3322 Minto Ct., Los Angeles.
Eisen, George, Capt., 265 Fell St., San Francisco.
Eliaser, Maurice Jr., Major, 490 Post St., San Francisco.
Emery, Wilfred H., Capt., 3704 Lowell Ave., Los Angeles.
Fogel, David, Capt., 1200 N. State St., Los Angeles.
Fowler, Donald C., Major, 17 Cornelia Avenue, Mill Valley.
Fowler, John D., Major, 710 N. June St., Hollywood.
Fox, Norman C., Capt., 421 Linden Ave., San Bruno.
Freibrun, Jacob L., Capt., 1133 Point View St., Los Angeles.
French, William F., Capt., 2827 Wynwood Lane, Los Angeles.
Fulton, Lee D., Capt., 2415 Jones St., San Francisco.
Furer, Stanford A., Capt., 1200 N. State St., Los Angeles.
Galbraith, Harold F., Major, 215 E. Commonwealth, Fullerton.
Garrett, Franklin H., Capt., Camarillo State Hosp., Camarillo.
Gibboney, Don B., Capt., 1908 Rodney Dr., Los Angeles.
Hatlelid, Frank H., Lt. Col., 190 27th Ave., San Francisco.
Hawkins, Joseph O., Major, 199 Mountain View Avenue, San Rafael.
Hill, Walter B., Capt., 160 Oak St., Laguna Beach.
Holaday, David D., Capt., 2019 Notre Dame, Belmont.
Honme, Owen H., Major, 105 S. Kilkea Dr., Los Angeles.
Hunt, Guy M. Jr., Capt., 1200 N. State St., Los Angeles.

California—Continued

Johnson, James B., Major, 1930 Wilshire Blvd., Los Angeles.
Kibby, Sydney V., Lt. Col., 1144 Elizabeth St., Pasadena.
Krupocki, Peter S., Major, 1537 East C St., Alturas.
Lewis, Elmer W., Capt., 127 4th St., Petaluma.
Lund, Grant V., Capt., 102 N. Brand St., Glendale.
Meyer, Hans A., Capt., 63 Seal Rock Dr., San Francisco.
Moore, Oliver M., Major, 6923 State St., Huntington Park.
Nelson, Harold O., Major, 302 Oliver St., Guadalupe.
Newgard, Kurt W., Capt., 35 Palm Avenue, San Francisco.
Ostrander, Harold R., Capt., 1355 Wilshire Blvd., Los Angeles.
Papkin, George, Major, 2423 St. George St., Los Angeles.
Parks, Floyd R., Major, 210 S. Norton Ave., Los Angeles.
Premo, Milton A., Capt., Sainte Claire Bldg., San Jose.
Present, Arthur J., Major, 358 Belvedere St., La Jolla.
Price, William H., Capt., 2400 S. Flower St., Los Angeles.
Reese, John D., Major, 1426 Henry St., Berkeley.
Ritchie, Douglas W., Lt. Col., Temple City.
Ross, Samuel, Major, 2603 21st Ave., San Francisco.
Rosenvold, Llyod K., Major, 1687 Hill Dr., Eagle Rock.
Rubenstein, Victor G., Lt. Col., 4121 Second St., Riverside.
Rue, George H., Capt., 3850 8th St., Riverside.
Schroer, William J., Capt., 1901 N. Flower St., Santa Ana.
Svoboda, Frank C., Lt. Col., 3105 33rd St., San Diego.
Swift, Coe T., Capt., 211 High St., Madera.
Thompson, G. D. C., Major, 2293 Washington, San Francisco.
Tomlinson, W. J., Major, 980 Hot Springs Rd., Santa Barbara.
Tucker, Sidney N., Lt. Col., 1746 9th Ave., San Francisco.
Woo, Henry B., Capt., 750 Grant Ave., San Francisco.
Wylie, Charles R., Major, 965 Gretna Green Way, Los Angeles.
Wyne, Paul S., Capt., 450 Sutter St., San Francisco.
Zumwalt, Elmo R., Lt. Col., 424 E. Tulare St., Tulare.

Colorado

Arneill, James R. Jr., Lt. Col., 110 S. University Blvd., Denver.
Frumess, Gerald M., Major, 1635 Hudson, Denver.
Garvin, Galen D., Capt., 1901 Arapahoe St., Golden.
Gichm, Rudolf E., Lt. Col., 1025 Monaco Parkway, Denver.
Harvey, Robert P., Major, Limon.
Liggett, William A., Major, 1324 Ash St., Denver.
Lipan, Edward M., Major, 354 Columbine St., Denver.
Livingston, Robert R., Capt., Glenwood Springs.
Macomber, Douglas W., Major, 4301 E. 6th Ave., Denver.
Richie, George T., Major, 570 High St., Denver.
Roark, Frank E., 1st Lt., 1510 Clermont St., Denver.
Sage, Bernard A., Major, 1616 Olive St., Denver.
Shivers, George C., Lt. Col., 6 N. Tejon St., Colorado Springs.
Sunderland, Karl F., Capt., 1551 Ivanhoe St., Denver.
Swigert, John L., Major, 1746 Kearney St., Denver.
Varian, Robert A., Capt., 1311 Marion St., Denver.

Connecticut

Beecher, Gilbert H., Capt., 78 Columbia Blvd., Waterbury.
Chait, Sidney A., Capt., 39A S. Main St., Middletown.
Cheney, Charles B., Capt., Hamden.
D'Alessio, Charles M., Capt., 75 Seymour Ave., Derby.
Kearney, William H., Capt., 406 Newfield Ave., Bridgeport.
Moore, Gilbert E., Major, 162 Post Rd., Darien.
Reichenbach, Alfred E., Capt., 165 N. Main St., Waterbury.
Robinson, David, Capt., 14 Chatham St., Hartford.
Swarts, William B. Jr., Major, 5 Glen Court, Greenwich.
Vermooten, V. D., Major, 34 Cold Spring St., New Haven.
Welch, Winthrop S., Capt., Hartford Hosp., Hartford.
Whitman, Loring, Major, Searles Rd., Darien.
Williams, Edward E., Major, 269 Church St., Naugatuck.
Yavis, John C., Major, 115 Dwight St., New Haven.

Delaware

Davidson, Douglas T. Jr., Major, Overlook, Claymont.
Gehret, Andrew M., Lt. Col., 311 N. Broom St., Wilmington.

District of Columbia

Elliott, Israel E. Jr., Capt., 1221 W St. N.W., Washington.
Gartlan, B. W., Capt., 4577 McArthur Blvd. N.W., Washington.
Gwynn, Henry B., Major, 4619 Charleston Ter., Washington.
Kepecs, Joseph G., Capt., St. Elizabeth's Hosp., Washington.
Lady, William T., Capt., 130 12th St. N.E., Washington.
Pelzman, Ivy A., Col., 1835 Eye St. N.W., Washington.
Simmons, A. Hugh, Major, 2358 6th St. N.W., Washington.
Smith, Clarke L. Jr., Capt., 311 T St. N.W., Washington.
Thurston, Roger G. Jr., Capt., 1414 Montello N.E., Washington.
Widome, Allen, Major, 402 Kentucky Ave. S.E., Washington.

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PHYSICIANS SEPARATED FROM SERVICE

Florida

Chappell, John R., Lt. Col., 733 Euclid Ave., Orlando.
Cullipher, Edward W., Major, S.W. 22d Terrace, Miami.
Drabek, Leonard A., Capt., Jackson Mem. Hosp., Miami.
Hartman, Sam F., Capt., 3490 13th Ave. S., St. Petersburg.
Keith, Gaines W., Capt., 1255 Peachtree St., Jacksonville.
Knowlton, Horace A., Major, 3109 Oaklyn Ave., Tampa.
Neal, Elwin G., Major, St. Vincent's Hosp., Jacksonville.
Pierce, Francis D., Lt. Col., 420 Sweet Bldg., Fort Lauderdale.
Range, Irving, Major, 15510 E. 1st St., Redington Beach.
Rogers, Hunter B., Capt., 27 N.W. 12th Ave., Miami.
Simmons, Irving E., Capt., Gadsden Co. Health Unit, Quincy.
Thomas, Efton J., Capt., 8834 Abbott Ave., Miami Beach.
Tomlinson, John P. Jr., Capt., 738 Cohassett Ave., Lake Wales.
Whitmer, Kenneth S., Capt., 1110 Huntington Bldg., Miami.

Georgia

Allen, Clarence C., Capt., 403 19th St., Columbus.
Bateman, Needham B. Jr., Lt. Col., 522 Candler Bldg., Atlanta.
Bowling, Jackson M., Capt., Forest Park.
Brown, Randall G., Capt., P. O. Box 123, Graymont.
Castellow, William F., Lt. Col., 121 W. College St., Americus.
Cooper, Charles F. Jr., Major, 1309 Oglethorpe St., Macon.
Davidson, David E., Capt., 1857 Peachtree Rd., Atlanta.
Evans, Edwin C., Major., Macon Rd., Route 5, Milledgeville.
Gold, Perry, Capt., 542 Capitol Ave. S.E., Atlanta.
Goodyear, W. E., Capt., 1223 Emory Dr., Emory University.
Greenberg, Irving L., Capt., 898 Washington St. S.W., Atlanta.
Grove, Edward W., Lt. Col., Riverside Dr., Gainesville.
Hammett, Howard H. Jr., Capt., 201 Gordon St., LaGrange.
Holder, James S., Major, 600 Winzor Ave., LaGrange.
Jarratt, William D., Major, 134 Magnolia St., Macon.
Jones, John P., Capt., 236 Stanislaus Circle, Macon.
Ketron, Hubert W., Major, 2915 N. Hills Rd., Atlanta.
Martin, Robert B. III, Major, Cuthbert.
McCurdy, James W., Major, 221 N St., Thomaston.
Miller, John M., Capt., 805 E. Henry St., Savannah.
Mitchell, Charles H., Major, 124 Superior Ave., Decatur.
Phinizy, Irvine, Lt. Col., 2330 Kings Way, Augusta.
Riser, Wm. H. Jr., Lt. Col., 3109 Ridgewood Rd. N.E., Atlanta.
Sappington, Thomas A., Major, Box 609, Thomaston.
Skiles, William V. Jr., Capt., 1057 Springdale Rd., Atlanta.
Smoot, Richard H., Capt., 181 Coventry Rd., Decatur.
Sutton, James M. Jr., Capt., 123 Isabella, Sylvester.
Walton, Charles R., Lt. Col., Veterans Admin., Augusta.
Whitaker, William G. Jr., Capt., 50 Armstrong St., Atlanta.
Young, George G., Major, LaFayette.

Idaho

Davies, Dale H., Capt., 315 N. 18th St., Boise.
Krueger, Alexander A., Capt., Ashton.
Newton, Abram M., Lt. Col., 529 S. 7th Ave., Pocatello.
Rawlinson, Ronald P., Capt., 114 N. Commercial St., Emmett.

Illinois

Adamski, Edwin J., Capt., 6448 N. Nashville Ave., Chicago.
Afremow, Melvin L., Major, 5200 Sheridan Rd., Chicago.
Baker, Norman L., Capt., 8257 S. Ellis Ave., Chicago.
Barron, Elmer A., Capt., 5437 W. Monroe St., Chicago.
Baxter, Ralph E., Capt., Children's Mem. Hospital, Chicago.
Beatty, Jackson D., Lt. Col., 404 Calhoun St., Morris.
Binswanger, Herbert F., Capt., 5021 Woodlawn Ave., Chicago.
Boehm, William F. Jr., Capt., 816 S. Ashland Blvd., Chicago.
Borkon, Eli L., Capt., 810 S. Elizabeth St., Carbondale.
Bousfield, Midian O., Col., 9323 S. Michigan Ave., Chicago.
Brodsky, Abraham, Capt., 827 Lakeside Pl., Chicago.
Byfield, George V., Major, 2970 N. Sheridan Rd., Chicago.
Campbell, James B., Major, 912 S. Wood St., (NP Inst.) Chicago.
Cant, John F., Capt., 3 S. Prospect Ave., Park Ridge.
Casciato, John J., Capt., 3108 W. Congress St., Chicago.
Ceaser, Leonard S., Capt., 5607 W. Lake St., Chicago.
Countryman, Howard D., Lt. Col., 1805 Clinton St., Rockford.
Dill, Loran H., Major, 7150 Crandon Ave., Chicago.
Dillon, Walter F., Capt., 1133 E. 81st Pl., Chicago.
Doescher, Paul F., Major, 211 N. Elmwood Ave., Oak Park.
Donoghue, Edmund R., Capt., 5201 S. Park Ave., Chicago.
Dooley, Samuel W., Capt., 614 E. Walnut St., Bloomington.
Douglass, Thomas C., Lt. Col., 303 E. Superior St., Chicago.
Doyle, Francis E., Capt., 102 LeMoyne Parkway, Oak Park.
Dresner, Milton H., Lt. Col., 7025 Merrill Ave., Chicago.
Evans, Harvey A., Capt., 703 Catherine St., Metropolis.
Faletti, Anthony J., Capt., 1011 Lake St., Oak Park.
Faulk, Elliott, Capt., 2012 N. Broadway, Shelbyville.

Illinois—Continued

Fiore, Frank F., Capt., 1656 W. 63d St., Chicago.
Flannery, Marvin G., Col., 424 Barton Place, Evanston.
Flentie, Edgar H., Major, 5948 W. Superior, Chicago.
Flickinger, George H., Capt., Hopedale.
Glashagel, Edward E., Capt., 480 Oakhill Rd., Elgin.
Glassman, Frank, Major, 710 Bittersweet Pl., Chicago.
Greenwood, Robert C., Major, 5515 Woodlawn Ave., Chicago.
Grissom, Robert L., Capt., 461 S. Seigel, Decatur.
Heller, Richard E., Capt., 6843 Cornell Ave., Chicago.
Hirschtick, Allan B., Capt., 1601 S. Kedzie, Chicago.
Isenberg, Howard L., 1st Lt., 3951 W. Congress St., Chicago.
Jurek, Ladislaus J., Capt., 6459 S. Whipple St., Chicago.
Karr, John B., Capt., 6627 S. Artesian, Chicago.
Katz, Charles, Capt., 2041 Pierce Ave., Chicago.
Kodl, Francis, Capt., 1801 S. Throop St., Chicago.
Kolb, Harold J., Capt., Benson.
Krueger, Francis J., 1st Lt., 3014 W. Fullerton Ave., Chicago.
Kruglick, John S., Capt., 6445 N. Fairfield Ave., Chicago.
Kucharski, Stanley C., Capt., 2221 W. Augusta Blvd., Chicago.
Kuchynka, Otto G., Capt., 2531 N. Mango Avenue, Chicago.
Lange, Howard L., Lt. Col., 903 East "B" St., Belleville.
Lawton, Stanley E., Lt. Col., 122 S. Michigan Ave., Chicago.
Lerner, Isadore, Capt., 736 Rose St., Kewanee.
Madden, Leo L., Capt., 73 Country Pl., Belleville.
Magree, Montie, Major, 629 S. 19th Avenue, Maywood.
Milcarek, Leonard J., Capt., 2430 N. Lotus Ave., Chicago.
Morrison, Allen R., Major, 1614 S. 15th Ave., Maywood.
Nadherny, George C., Capt., 2307 S. 60th Ct., Cicero.
Nehí, Albert, Major, 1031 S. Lincoln Ave., Kankakee.
Newman, Leon, Major, 6200 N. Kenmore Avenue, Chicago.
Nowak, Frank J., Capt., 6110 S. California Ave., Chicago.
O'Connor, John W., Capt., 220 Moss Ave., Peoria.
Ohrenstein, Irving R., Capt., 1120 S. Karlov, Chicago.
O'Neil, Hugh B., Capt., 1220 N. State St., Chicago.
Palumbo, Carl F., Capt., 529 N. Aberdeen St., Chicago.
Peters, Frank S., Capt., 1753 W. Congress St., Chicago.
Quinn, Everett R., Major, 5th & Edwardsville Road, East Alton.
Ragins, Alex B., Lt. Col., 7719 S. Kingston Ave., Chicago.
Rathbun, George E., Capt., Preemption.
Roberts, Jack, Capt., Lockport.
Rothschild, Robert R., Capt., 1380 Hyde Park Blvd., Chicago.
Rumore, Peter C., Major, 120 S. Oak St., Effingham.
Ryan, Lawrence D., Capt., 615 Deming Place, Chicago.
Salvatore, Anthony G., Capt., 403 S. Pine St., Zeigler.
Savage, John L., Major, 2650 Ridge Avenue, Evanston.
Schafer, Robert, Major, 7133 E. End Ave., Chicago.
Schneider, Max, Capt., 853 Vernon Ave., Glencoe.
Smith, Charles J., 1st Lt., 2537 S. Prairie Ave., Chicago.
Solander, Carl K., Capt., 530 Arlington Pl., Chicago.
Stoll, Charles G., Major, Sumner.
Tourney, Guy L., Capt., 325 S. 14th St., Quincy.
Tovarek, Joseph J., Capt., 1348 S. Harvey Avenue, Berwyn.
Trauba, Norbert C., Lt. Col., Vet. Admin. Facility, Hines.
Trimmer, Albert O., Capt., Cerro Gordo.
Tyllas, Harry A., Capt., 6217 Drexel Ave., Chicago.
Walker, Frederick E., Capt., 2442 N. Orchard St., Chicago.
Warsaw, Eugene, Capt., 6951 Merrill Avenue, Chicago.
Waud, Sidney P., Lt. Col., 223 E. Delaware St., Chicago.
Welch, James K., Capt., Cuba.
Wright, Nelson A. Jr., Capt., 1450 Park Ave., Pekin.
Yesinick, L., Capt., 4745 Ellis Ave., Chicago.
Young, Henry M., Major, 231 E. Superior St., Chicago.
Zaborsky, Emil R., Capt., 6347 S. Kedzie, Chicago.

Indiana

Avery, Bruce F., Capt., 1948 Wespark Ave., Whiting.
Cohn, Alvin F., Capt., 406 W. Tipton St., Seymour.
Connell, Paul S., Major, 117 W. Adams St., Plymouth.
Culbertson, Carl S., Lt. Col., 531 N. Main St., South Bend.
Davis, George D., Capt., 5835 Rosslyn Ave., Indianapolis.
Dian, August J., Capt., 729 Broadway, Gary.
Dusard, Joseph C., Major, 1405 21st St., Bedford.
Edwards, William F., Major, 615 Beharrell Ave., New Albany.
Egbert, Herbert L., Capt., 2912 E. 16th St., Indianapolis.
Herendeen, Elbie V., Capt., 317 W. 7th St., Rochester.
Hewitt, Marshall I., Major, 1702 Sunnymede Ave., South Bend.
Hunt, Gayle J., Capt., 420 S. 23d St., Richmond.
Isler, Nathaniel C., Major, 901 Morningside Dr., Jeffersonville.
Kennedy, Hunter F., Capt., 822 N. Denny St., Indianapolis.
Little, John W. Jr., Major, 530 Powell Pl., Indianapolis.
Lund, Leonard C., Major, 115 E. Walnut St., Argos.
McLaughlin, Calvin P., Lt. Col., 200 W. State St., Pendleton.

PHYSICIANS SEPARATED FROM SERVICE

Indiana—Continued

Malott, Frederick R., Major, Converse.
Morris, Warren V., Major, 410 S. Main St., Monticello.
Mount, Mathias S., Major, 340 W. Mechanic St., Bloomfield.
Oliphant, Frank W., Capt., 701 Mulberry St., Mount Vernon.
Paulissen, George T., Capt., 2363 N. Alabama St., Indianapolis.
Porter, Carl M., Capt., 124 Cook St., Jasonville.
Rang, Robert H., Capt., 211 N.E. 9th, Washington.
Richard, Norman F. III, Capt., 29 W. Mechanic, Shelbyville.
Rosenbloom, Philip J., Capt., 2035 W. 4th Pl., Gary.
Salb, Max C., Capt., 1120 N. Pennsylvania, Indianapolis.
Schulhof, Maurice G., Major, 1408 Wheeling Ave., Muncie.
Sicks, O. W., Lt. Col., 5609 N. Pennsylvania St., Indianapolis.
Sparks, Alan L., Major, 4310 Central Ave., Indianapolis.
Sweet, Howard E., Lt. Col., 215 Med. Arts Bldg., Richmond.
Tremor, V. F., Lt. Col., 2401 Cold Springs Rd., Indianapolis.
Van Epps, Eugene F., Capt., 27 W. St. Joseph St., Indianapolis.
Ward, James W., Capt., 316 Lincoln Way E., Mishawaka.
Weinstein, Louis, Capt., Vet. Admin. Facility, Marion.
Whitlatch, Arthur A., Lt. Col., Milan.

Iowa

Adams, Marvin E., Capt., 2010 6th Ave., Apt. 4, Des Moines.
Bennett, Geoffrey W., Lt. Col., 827 S. 2d St., Oskaloosa.
Crowley, Frederick A., Capt., 648 Harwood Dr., Des Moines.
Ellison, George M., Major, 1120 2d Ave. S., Clinton.
Lehr, Sylvan M., 1st Lt., 205 14th St. S.E., Cedar Rapids.
McElhinney, William T., Major, 2 Bella Vista, Iowa City.
O'Connell, John R., Major, 1435 1st Ave., N., Ft. Dodge.
Paschal, George A., Capt., Box O, Williams.
Peek, Levin H., Capt., Lake City.
Petersen, Millard T., Capt., 810 Spruce St., Atlantic.
Scharle, Theodore, Capt., 2080 Roosevelt St., Dubuque.
Seibert, Cecil W., Major, 105 Roosevelt Dr., Waterloo.
Stauch, Omar A., Capt., Whiting.
Sternhill, Isaac, Capt., 729 Forrest Dr., Council Bluffs.
Tamisiea, Francis X., Capt., 313 N. 3rd St., Missouri Valley.
Tindall, Robert N., Major, LeMars.

Kansas

Beebe, Edmer, Capt., E. Cedar St., Olathe.
Coughlin, Samuel T., Major, 545 W. 7th St., Larned.
Ellis, Stephen S., Major, 201 W. New St., Coffeyville.
Kosar, Clarence D., Major, 719 W. 8th St., Concordia.
Martin, Earl A., Capt., Oskaloosa.
McKean, Willis H., Major, 1620 Bradish Rd., Kansas City.
Reece, Adelbert S., Capt., Gardner.
Richardson, Lyman K., Col., 5328 Belinder Rd., Kansas City.
Sanders, George E., Capt., 927 S. Broadway, Leavenworth.
Unruh, Rudolph T., Capt., Goessell.
Weaver, James B., Lt. Col., 5103 Hudson Rd., Kansas City.

Kentucky

Abell, William I. Jr., Capt., 1433 S. 3d St., Louisville.
Atherton, Charles V., Capt., 2214 Walterdale Ter., Louisville.
Brown, Felix M., Capt., 1637 S. Main St., Hopkinsville.
Dickinson, Lewis, Capt., 321 W. Washington, Glasgow.
Dorger, John A., 1st Lt., Rt. 4, Cresent Rd. & Dix Highway, Fort Mitchell.
Hoffman, Delbert G., Capt., 4500 Meridale Ave., Louisville.
Humphrey, Edward C., Capt., Beaumont Ave., Harrodsburg.
Johnson, William O., Lt. Col., 72 Valley Rd., Louisville.
Martin, Herman E., Major, 1504 Bath Ave., Ashland.
Nickell, William H., Capt., West Liberty.
O'Donnell, William F. Jr., Capt., Lancaster Ave., Richmond.
Orr, Robert A., Lt. Col., 210 W. Walnut St., Mayfield.
Osler, George E., Capt., 106 16th St., Newport.
Payne, Minor B., Capt., Blue Diamond.
Pipes, James L., Capt., Moreland.
Pope, Mason G., Capt., W. Main St., Richmond.
Prichard, Hubert J., Capt., 3216 Oakland Ave., Catlettsburg.
Reardon, Frederick Jr., Capt., 638 Main, Bowling Green.
Schwegman, Cletus W., 1st Lt., 129 Ohio Ave., Fort Thomas.
Smiser, Harmon T., Major, Cynthiana.
Stacy, Adam Jr., Major, Pineville.
Sugarman, Benjamin E., Capt., Williamstown.
Van Arsdall, C. B. Jr., Capt., 1024 Beaumont, Harrodsburg.

Louisiana

Adler, Hartwig M., Capt., % W. Irving Moss, 447 Audubon St., New Orleans.
Carriere, Samuel Jr., Capt., Gilbert.
Everett, William F., Capt., Oak Grove.
Gardiner, George L. Jr., Capt., Gueydan.

Louisiana—Continued

Golden, Abe, Capt., 2 Everett Pl., New Orleans.
Hamilton, Andros S., Lt. Col., 1300 Island Dr., Monroe.
Herring, John S., Major, 1229 Cadiz St., New Orleans.
Kushner, Louis Z., Major, 714 Division St., Lake Charles.
Kyle, William W., 1st Lt., 21 Neron Pl., New Orleans.
LeDoux, Marion J., Major, 2007 Estlanade Ave., New Orleans.
Lubritz, Ephraim, 1st Lt., Amite.
McVea, Charles, Major, Box 1732, Baton Rouge.
Nelson, Edward W., Major, 4407 Canal St., New Orleans.
Norman, W. D., Capt., 7709 St. Charles Ave., New Orleans.
Overdyke, Donald F. Jr., Capt., 808 Ratcliff St., Shreveport.
Ramos, Trinidad M., Capt., 4521 Iberville St., New Orleans.
Richardson, Orville J., Major, Manifest.
Rivenbark, William C., Major, 2801 St. Charles, New Orleans.
Sampognaro, Vincent J., Capt., 502 Bres St., Monroe.
Samson, Martin F., Capt., Charity Hospital, New Orleans.
Soniat, Theodore L. L., Major, 2436 Calhoun St., New Orleans.
Strug, Lawrence H., Lt. Col., 2617 Joseph St., New Orleans.
Tannehill, Theodore L., Capt., Urania.
Tardo, Cosmo J., Capt., 911 Conti St., New Orleans.
Thomas, Edward P., Major, 1331 Philip St., New Orleans.
Whitaker, Joseph R., Capt., St. Joseph.

Maine

Crane, Lawrence, Capt., Rockland.
Lawrey, Oran R. J., Major, Eastland Hotel, Portland.
Metcalf, John T., Major, Water St., Lubec.
Soule, Gilmore W., Capt., 80 Broad St., Rockland.
Spear, William, Capt., 300 Main St., Lewiston.
Vachon, Robert D., Capt., 50 Winter St., Sanford.

Maryland

Allen, William K., Capt., Provident Hosp., Baltimore.
Anderson, Andrew R., Major, 700 Cathedral St., Baltimore.
Andrews, Robert M., 1st Lt., 9601 Colesville Rd., Silver Spring.
Byerly, Marshall P., Major, 3232 Carlisle Ave., Baltimore.
Debuskey, Mathew, Major, 2436 Lakeview Ave., Baltimore.
Gillis, Marion H. Jr., Lt. Col., 405 Bush St., Salisbury.
Jones, Howard W. Jr., Capt., 325 Hawthorne Rd., Baltimore.
Levin, Milton, Capt., 2224 Eutaw Pl., Baltimore.
Lieberman, Alfred T., Capt., % Filtzer, 2216 Park, Baltimore.
Lumpkin, William R., 1st Lt., 2602 Guilford Ave., Baltimore.
Miceli, Joseph, Capt., 451 E. 28th St., Baltimore.
Nolan, James J., Capt., 608 Frederick Rd., Catonsville.
O'Loughlin, R. K., Capt., 21 Sherman Ave., Takoma Park.
Ozazewski, John C., Capt., 1930 Eastern Ave., Baltimore.
Proctor, Samuel E., Lt. Col., 113 Deepdene Rd., Baltimore.
Sardo, Robert S., Capt., Clarksville.
Schneider, Meyer M., Capt., U. of Md. Hosp., Baltimore.
Singewald, Martin L., Lt. Col., 1520 N. Broadway, Baltimore.
Tankin, Louis H., Capt., 4014 Woodhaven Ave., Baltimore.
Van Ormer, W. A., Capt., 101 Washington St., Cumberland.
Weintraub, Harry, Capt., 1730 E. Fayette St., Baltimore.
Woodward, Theodore E., Major, 1 Park Ave., Westminster.

Massachusetts

Abramson, Julius, Lt. Col., 138 Algonquin Rd., Newton.
Albright, Hollis L., Major, 990 Center St., Newton Center.
Alexander, Eben Jr., Capt., 300 Longwood Ave., Boston.
Allan, Malcolm S., Capt., 19 Brown St., Palmer.
Allen, Eugene E., Major, 4 Congress St., Milford.
Allen, Henry F., 1st Lt., 200 Beacon St., Boston.
Allen, Timothy E., Major, 62 Freeman St., Arlington.
Ames, Melvin F., Capt., 58 High St., Newburyport.
Amiral, Hiram H., Major, Turnpike Rd., Southboro.
Barbour, Charles M. Jr., Capt., 125 Nehoiden Rd., Waban
Brugsch, Heinrich G., Capt., 6 Spinney Ter., Belmont.
Clifford, William J., Capt., 6 Myrtle St., Milford.
Cogswell, Thomas G., Major, City Hosp., Worcester.
Colantino, George J., Capt., 490 Highland Ave., Malden.
Cooke, Richard C., Major, Metropolitan State Hosp., Waltham.
Cotter, Joseph R., Lt. Col., 3 Wallace Ct., Charleston.
Crane, Chilton, Major, Richmond.
Croskery, William F., Major, 261 Reedsdale Rd., Milton.
Desmet, George W., Capt., 27 Belmont, North Andover.
Donaghy, Raymond M. P., Capt., Mass. Gen. Hosp., Boston.
Elkin, Milton, Capt., 16 Pasadena Rd., Dorchester.
Fleck, Stephen, Capt., 330 Brookline Ave., Boston.
Hagopian, Norman, Capt., 5 Linden St., Worcester.
Hastings, N., Capt., 16 Emerson St., Brookline.
Hawkes, Stanley W., Major, 290 Main St., Saugus.
Inserra, Frank, Capt., 12 Mason St., Medford.
Jacobs, Nathan, Capt., 211 Main St., Fisherville.

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PHYSICIANS SEPARATED FROM SERVICE

Massachusetts—Continued

James, David F., Capt., 721 Huntington Ave., Boston.
Jaques, William E., Capt., 25 High Rd., Newbury.
Joress, Mark H., Major, 79 Nahant St., Lynn.
Kowalski, Stephen F., Capt., 343 Washington St., Haverhill.
Mack, Ernest W., Major, 270 Brookline Ave., Boston.
Marcus, Phillip S., Capt., 42 Linnaean St., Cambridge.
Mollomo, Joseph F., Major, 18 Arcadia St., Dorchester.
Nahigian, Russell, Capt., 11 Myrtle St., Springfield.
Neber, Jacob, 1st Lt., 40 Miller Rd., Newton.
Olans, Sidney, Major, 57 College Ave., Somerville.
Peabody, Stephen D., Capt., 266 High St., Newburyport.
Prather, George C., Major, 11 Oakcliff Rd., Wellesley Hills.
Radcliffe, Frederick R., Lt. Col., 60 Eastland Ter., Haverhill.
Ravreby, Louis, Capt., Norfolk Co. Hosp., South Braintree.
Reynolds George S., Lt. Col., 593 Holmes Rd., Pittsfield.
Seidenberg, Daniel, Capt., 12 Pleasant St., Spencer.
Shapiro, Robert, Capt., 39 Brunswick St., Roxbury.
Sharp, Morris L., Major, Foxboro State Hosp., Foxboro.
Shaw, Jules H., Major, 1396 Commonwealth Ave., Brighton.
Snedeker, Lendon, Lt. Col., 30 Dudley St., Brookline.
Spring, George V., Capt., East Pepperell.
Stanley, Howard W., Major, 119 Belmont St., Worcester.
Warthin, Thomas A., Lt. Col., 226 Marlborough St., Boston.
Wegner, Walter R., Major, Woodridge Rd., Wellesley.
Weiser, Albert, Capt., 1059 Pleasant St., Fall River.
Whalen, Kearons J., Capt., 49 Charles St., Pittsfield.
Wiener, Harry J., Capt., 51 Nahant Ave., Revere.
Wiseblatt, Aaron C., Capt., 16 Columbia Rd., Dorchester.
Wyatt, George M., Capt., 108 Griggs Rd., Brookline.
Yemm, Warren A., Capt., 15 Boylston Rd., Newton Highlands.

Michigan

Acocks, James R., Capt., Copper County Sanatorium, Houghton.
Beebe, Irvin J., Major, Main St., Morenci.
Block, Malcolm, Capt., 716 Catherine St., Ann Arbor.
Christie, Joseph W., Lt. Col., 5601 Hatchery Rd., Pontiac.
Christophersen, James W., Capt., 1075 W. Forest, Muskegon.
Courville, Charles J., Major, 1621 Burlingame, Detroit.
Crane, Thomas P., Major, 22356 Edison Ave., Dearborn.
Croll, Leo J., Major, 18605 Fairfield, Detroit.
Daugharty, Robert V., Capt., 209 S. Shelby St., Cadillac.
Finnie, Raymond G., Major, 304 S. Jefferson St., Hastings.
Fisher, Joseph V., Capt., 220 Madison St., Chelsea.
Fleishman, Norman A., Capt., 1094 Jefferson St., Muskegon.
Foerster, F. E., Capt., 1402 Washington Heights., Ann Arbor.
Foust, Earl W., Capt., 624 S. Gainsboro, Royal Oak.
Graubner, Franklin L., Capt., Marshall.
Gutterman, Meyer A., Capt., 2987 Leslie Ave., Detroit.
Imthun, Edgar F., Capt., 113 E. Jefferson, Grand Lodge.
Irwin, William D., Capt., 2333 Sheffield Dr., Kalamazoo.
Jacoby, Abraham H., Major, 314 Green Ave., Bay City.
Lapides, Jack, 1st Lt., University Hosp., Ann Arbor.
Levagood, Floyd B., Capt., 16231 Greenlawn, Detroit.
Little, Samuel C., Major, University Hospital, Ann Arbor.
McNicholas, John R., Capt., Marenisco.
McQuiggan, Paul F., Major, 1134 Bishop Rd., Grosse Pointe.
McVay, C. B., Capt., 4510 E. Huron River Dr., Ann Arbor.
Medvezky, Michael J., Major, 1813 22nd St., Bay City.
Mills, Clinton C., Major, 4212 Glendale Ave., Detroit.
Morrison, Donald B., Major, Tekonsha.
Neill, Edwin J., Capt., 733 Lincoln Blvd., Lincoln Park.
Norgaard, Hal V., Major, Marlette.
Okun, Milton H., Capt., 838 W. Cedar St., Kalamazoo.
Payton, Charles F., Capt., 248 N. Bates, Birmingham.
Peggs, George F., Capt., 5419 Livernois Ave., Detroit.
Podezwa, J. W., Capt., 1297 Lochmoor, Grosse Pointe Woods.
Retallack, Russell C., Capt., 621 Genesee St., Iron River.
Rey, George E., Capt., 870 Burlingame, Detroit.
Schultz, Frank R., Capt., 925 Tuscola St., Saginaw.
Sugarman, Marcus H., Major, 2261 W. Philadelphia, Detroit.
Vanderzalm, T. P., Lt. Col., Vet. Admin. Center, Dearborn.
Vivirski, Edward E., Capt., 603 S. Elm Ave., Jackson.
Wellard, Henry C., Major, 8530 Medbury Ave., Detroit.
Wietersen, Fred K., Major, 10025 Elgin, Huntington Woods.
Wunsch, R. E., Capt., 646 Washington Rd., Grosse Pointe.
Zukowski, S. A., Capt., 7062 Duncan, Detroit.

Minnesota

Anderson, David M., 1st Lt., 406 Walnut St., Minneapolis.
Chunn, Stanley S., Capt., Pipestone.
Coddon, Walter D., Major, 992 Laurel Ave., St. Paul.
Conant, Robert F., Capt., 713 N. 6th St., Brainerd.
Erickson, Reuben F., Lt. Col., 4638 Edgebrook Pl., Minneapolis.

Minnesota—Continued

Grogan, John M., Capt., Wadena.
Hagen, Paul S., Major, 816 Woodland Ave., Crookston.
Ingalls, Edgar G. Jr., Capt., 1720 W. 31st St., Minneapolis.
Ingebrigtson, Ernest K., Capt., 514 9th St. S., Moorhead.
Irons, William E., Capt., Mayo Clinic, Rochester.
Johnson, Emil W., Capt., 3541 Portland Ave., Minneapolis.
Lien, Richard J., Major, 516 5th St., S.W., Rochester.
Mason, James A., Major, 804 4th St., International Falls.
Mead, Louis C., Major, U. S. Vet. Facility, Minneapolis.
Mooney, Robert D., Major, 418 Beacon Ave., St. Paul.
O'Connor, William B., Capt., 1163 Hague Ave., St. Paul.
Quattlebaum, Frank W., Capt., 117½ 12th Ave., Rochester.
Richardson, Frederick S., Lt. Col., 3421 Park Ave., Minneapolis.
Smith, Frederick A., Major, 417 9th Ave., S.W., Rochester.
Stebbins, T. L., Major, 1931 S. Dupont Ave., Minneapolis.
Stevenson, Walter D. Jr., Major, Mayo Clinic, Rochester.
Tenner, Robert J., Major, Mayo Clinic, Rochester.
Titrud, Leonard A., Major, 2410 Butler Pl., Minneapolis.
Van Valkenburgh, John D., 1st Lt., Floodwood.
Walsh, Francis M., Capt., 246 Bedford St., Minneapolis.
White, Raleigh R., Capt., 1406 1st St., S.W., Rochester.
Woodruff, Robert, Lt. Col., Mayo Clinic, Rochester.

Mississippi

Austin, Jessie W., Capt., Forest.
Baines, Thomas A., Lt. Col., 903 N. State St., Jackson.
Dabbs, Rome T., Capt., Aberdeen.
Eddleman, Thomas S., Lt. Col., 710 Grand Ave., Yazoo City.
Garner, Byron O., Capt., Pontotoc.
Garrison, Harvey F. Jr., Major, 748 Gillespie St., Jackson.
Mason, George S., Major, Lumberton.
McKell, Thomas E., Major, Sanatorium.
Parker, William H., Major, 524 Poplar Ave., Philadelphia.
Powell, Frank M. Jr., Capt., 206 S. Church St., Tupelo.
Robertson, Milton H., 1st Lt., 1322 Jackson St., Corinth.
Smith, Robert W., Col., 103 E. Peace St., Canton.
Synnott, James D., 1st Lt., Route 3, Eupora.
Thompson, Charles C. Jr., Major, Columbia.

Missouri

Aylward, Howard J., Capt., St. Louis County Hosp., Clayton.
Carlson, Hjalmar E., Capt., 1745 Swatzel Rd., Kansas City.
Casey, Edwin J., Capt., 6063 Kingsbury Blvd., St. Louis.
Cofer, James C., Major, Kennett.
Deutch, Max, Major, 5108 Maple Ave., St. Louis.
Drisko, Robert M., 1st Lt., 4133 Highland Ave., Kansas City.
Ellis, Samuel T. Jr., 1st Lt., 1302 Benton, Kansas City.
Ferguson, J. T. Jr., Major, 601 E. Armour Blvd., Kansas City.
Ferguson, Lewis H., Major, St. John's Hosp., St. Louis.
Gray, William H., Capt., 2 Hawbrook Lane, Kirkwood.
Gregory, K. D., Major, City Hosp., 1515 LaFayette, St. Louis.
Heller, Bernard M., Major, 6404 McGee St., Kansas City.
Isbell, Charles H. Jr., Capt., 1046 S. Garrison, Carthage.
Jolly, Benjamin N., Major, State Hosp. 3, Nevada.
Jones, James B., Capt., 1400 Pine St., Rolla.
Jordan, Edward J., Major, 3246 N. Delor St., St. Louis.
Kinder, James A. Jr., 1st Lt., 102a N. Ellis, Cape Girardeau.
Lentz, Harold C., Major, 214 S. Wood St., Neosho.
Littmann, Lewis E., Major, 11 Lake Forest, Richmond Heights.
McQuitty, James T., Capt., Blairstown.
Mills, Charles W. Jr., Capt., 630 S. Kingshighway, St. Louis.
Reich, Harry A., Capt., 5701 Lindenwood, St. Louis.
Reynolds, Garland A., Major, 1236 Normal, Cape Girardeau.
Schlicht, Sherman E., Capt., Niangua.
Schulein, Vernon E., Capt., 1387 Burd Ave., St. Louis.
Senturia, Ben D., Capt., 7017A Amhurst Ave., University City.
Stolar, Jacob, Capt., 4931 Laclede, St. Louis.
Stricker, Eamil A., Major, St. James.
Underwood, Johnson Jr., Capt., Parksville.
Young, John H., Major, Galena.

Montana

Lockridge, Thaddeus L., Capt., Whitefish.
Teel, Harold M., Major, Polson.

Nebraska

Ayers, LeRoy J., Capt., 3208 Harney St., Omaha.
Bartholomew, Philip H., Lt. Col., 3345 S. 30th St., Lincoln.
Dowell, Dawson A., Major, 4321 Poppleton, Omaha.
Lauvetz, Frank R., Capt., Wahoo.
Murphy, Albert V., Major, 9900 Florence Hts. Blvd., Omaha.
Niemeyer, Arnold C., Major, Dewitt.
Palmer, Robert B., Major, 1016 Sharp Bldg., Lincoln.

PHYSICIANS SEPARATED FROM SERVICE

Nevada

Anderson, Frederick M., Lt. Col., 204 Minnesota, Carson City.
Eklund, Roy N., Capt., General Delivery, Overton.
Winikow, William E., Capt., U. S. Veterans Hospital, Reno.

New Hampshire

Birnbaum, Leo, Major, 56 School St., Lebanon.
Chase, Walter E., Capt., Rumney.
Jacques, Leo C., Capt., 178 High St., Somersworth.
Sheehan, John F., Major, 387 E. High St., Manchester.
Wiemers, Eugene L., Major, 105 Pleasant St., Concord.

New Jersey

Abers, Bernard D., Capt., 574 Summit Ave., Jersey City.
Abramson, Solomon, Capt., 1181 Jaques Ave., Rahway.
Adams, Gerald, Capt., 135 Eastern Parkway, Brooklyn.
Adler, Harold L., Capt., 976 Fox St., New York.
Alonzo, Gerard J., Major, 615 Stuyvesant Ave., Lyndhurst.
Angelillis, Paul, Capt., 76 State St., Hackensack.
Arbeit, Sidney R., Capt., 56 Gifford Ave., Jersey City.
Balinson, Conrad M., Capt., 170 Bowers St., Jersey City.
Barone, Leo J., Capt., 108 Surie Ave., Clifton.
Berger, Harold R., Capt., 463 E. Jersey St., Elizabeth.
Bernstein, Benedict J., Capt., 928 W. Front St., Plainfield.
Black, Benjamin S., Lt. Col., 450 Avenue A., Rochester.
Boyd, Robert P., Capt., 120 Martine Ave., Fanwood.
Buffey, Walter H., Capt., 19 Oakwood Pl., Elizabeth.
Calvert, William C., Capt., 225 Gregory Ave., West Orange.
Cohen, Sidney P., Capt., 512 Franklin Avenue, Nutley.
Cohen, William, Major, 1007 Greenwood Avenue, Trenton.
Davidson, Henry A., Major, 31 Lincoln Park, Newark.
Dein, Irving O., Capt., 4 S. Plaza Pl., Atlantic City.
D'Elia, William J., Major, 394 2nd St., Jersey City.
De Michele, Roland V., Lt. Col., 103 N. 10th St., Newark.
Deutel, Oscar R., Capt., 276 Franklin St., Bloomfield.
Di Giacomo, William H., Capt., 223 Fairmont Ave., Newark.
Fader, Ferdinand, Capt., 3 S. Grove St., East Orange.
Farb, Harry H., Capt., 121 Lyons Avenue, Newark.
Fay, Vincent G., Lt. Col., 109 N. 4th St., Harrison.
Finnegan, William R. Jr., Capt., 265 Handy, New Brunswick.
Fischer, David D., Capt., 356 Milburn Ave., Milburn.
Gelman, Sidney, Capt., 600 E. 27th St., Paterson.
Gerne, Timothy A., Capt., 972 Summit Ave., Jersey City.
Gitterman, David A., Capt., 519 Engle St., Englewood.
Grant, William E., Capt., 1370 Morris Ave., Union.
Grimes, Robert R., Capt., 480 Sagamore Avenue, Teaneck.
Haley, Paul W., Capt., 719 Sanford Avenue, Newark.
Hartman, Winfield L., Major, 2 Elm Ct., South Orange.
Hoffman, Charles W., Capt., 226 David St., South Amboy.
Horowitz, Alexander S., Capt., 463 Jersey Ave., Jersey City.
Kissinger, Donald J., Capt., 150 E. Madison, Dumont.
Klein, Michael M., Major, 210 Conklin Ave., Hillside.
Koenig, Albert S. Jr., Capt., 382 Turrell Ave., South Orange.
Kondor, Joseph S., Capt., 978 S. Broad St., Trenton.
Krichbaum, Carroll E., Lt. Col., 63 Myrtle Ave., Montclair.
Landon, Hyman R., Capt., 105-05 69th Ave., Forest Hills.
Lapin, Samuel B., Capt., 628 W. State St., Trenton.
Laurusonis, John J., Capt., 300 W. Buck St., Paulsboro.
Lehman, David J. Jr., Major, 2 Highwood Road, West Orange.
Lemmon, Junius M., Capt., 137 Belvidere Ave., Washington.
Liva, Giusto A., Capt., Wyckoff Ave., Wyckoff.
Lynn, Hugh B., Capt., 27 Westview Road, Verona.
Mackin, John J., Capt., 596 Bergen Ave., Jersey City.
Maffeo, Carl E., Major, 137 Adams St., Newark.
Manno, Peter D., Capt., 81 W. 25th St., Bayonne.
Meinhard, Fred, Major, 154 Van Buren St., Newark.
Milanesi, Armand M., Major, 208 44th St., Union City.
Moon, Dabney von Knobloch, Major, 138 E. 7th St., Plainfield.
Morrow, Charles S., Major, 321 S. 9th St., Newark.
Naclerio, Amedeo C., 1st Lt., N. J. State Hospital, Greystone Park.
Nadel, Charles I., Capt., 1186 Clinton Ave., Irvington.
O'Shea, John J., Capt., 2200 Palisade Ave., Weehawken.
Pearlman, Saul J., Lt. Col., 210 Lexington Ave., Passaic.
Perrotta, Anthony J., Major, 94 Maple Avenue, Red Bank.
Petinga, Thomas J., Capt., 110 S. Georgia, Atlantic City.
Pink, Solomon H., Capt., 252 Highland Avenue, Passaic.
Polisar, Ira A., Major, Holy Name Hosp., Teaneck.
Rampona, Joseph M., Major, 272 Nassau St., Princeton.
Randall, George E., Capt., 10-02 River Road, Fair Lawn.
Rathauser, Frank, Capt., 25 Bryn Mawr, Trenton.
Ristine, Edwin R., Lt. Col., 123 Maple Avenue, Westville.
Rosenbaum, Samuel, 1st Lt., 20 Erwin Place, West Orange.
Rosenthal, Abraham, Capt., 43 3d Ave., Atlantic Highlands.

New Jersey—Continued

Rubin, William, Capt., 419 George St., New Brunswick.
Russomanno, Paul J., Capt., 212 Clifton Avenue, Newark.
Ruttenberg, Louis, Capt., 19 Hopkins St., Woodbury.
Salmeri, Edward J., Major, 500 Marlboro Rd., Wood-Ridge.
Samuel, Jerome H., Capt., 31 Lincoln Park, Newark.
Sandler, Samuel A., Lt. Col., 1166 Laurelton Parkway, Teaneck.
Santangelo, Emil L., Capt., 313 18th Ave., Paterson.
Saxe, David H., Major, 100 High St., Passaic.
Sena, Frank W., Capt., 18 Isabella Avenue, Newark.
Smith, Meyer, Capt., 14 Webster Ave., Jersey City.
Sorett, Joseph, Capt., 365 S. Burnet St., East Orange.
Tachau, Hans A., Capt., E. Main St., Prattsburg.
Teichholz, Max H., Capt., 164 Hamilton Ave., Passaic.
Wacker, William F., Capt., 1224 Salem Ave., Hillside.
Walsh, Thomas J., Lt. Col., 514 Greenwood Ave., Trenton.
Wise, John S., Capt., 73 Westcott Road, Princeton.
Yerg, Raymond A., Capt., 51 Grandview Pl., Upper Montclair.
Zirpolo, Gene A. V., 1st Lt., 449 W. Grand Ave., Rahway.
Zucker, Isadore, Major, 635 High St., Newark.

New Mexico

Anthony, William D., Capt., 700 S. Strong, Gallup.
Womack, Carrol L., Major, 701-3 N. Canal St., Carlsbad.

New York

Alberti, Vincent S., Major, 212 E. 15th St., New York.
Altieri, Anthony J., Capt., 2472 Grand Ave., New York.
Amazon, Peter, Capt., 919 Park Place, Brooklyn.
Anderson, Orrin E., Major, Terrace Lodge, Clifton Springs.
Anhalt, James E., Major, Peck Memorial Hospital, Brooklyn.
Aquillino, Armand U., Major, 142 Harwood Ave., Syracuse.
Argentieri, Daniel D., Capt., 416 Bainbridge St., Brooklyn.
August, Stanley, Capt., 1691 E. 15th St., Brooklyn.
Ayer, Guy D. Jr., Major, 13 River St., Cooperstown.
Battista, Louis C., Capt., 301 Washington St., Watertown.
Baum, George L., Capt., 625 Montgomery St., Brooklyn.
Behm, Karl H., Capt., 54 Butler St., Westbury.
Benny, John M., Capt., 135 Parks St., Buffalo.
Bereston, Eugene S., Major, Montefiore Hospital, New York.
Berg, Harry E., Capt., 2250 Clarendon Rd., Brooklyn.
Berger, Murray M., Major, 300 Central Park West, New York.
Berke, Rudolph, Capt., 831 Gerard Ave., Bronx.
Berkovsky, Max, Capt., 955 Walton Ave., New York.
Beswick, William F., Lt. Col., 400 Elmwood Ave., Buffalo.
Bieber, Irving, Capt., 104 Mowbray Pl., Kew Gardens.
Bishop, Louis F. Jr., Lt. Col., 139 E. 79th St., New York.
Black, Everett O., Major, Fredonia.
Block, David E., Capt., Madalin.
Bloom, Morris J., 1st Lt., 176-28 69th Ave., Flushing, L. I.
Bloom, William, Capt., 460 56th St., Brooklyn.
Bock, Raymond F., Capt., 1621 Nelson Ave., Bronx.
Bohrer, Charles D., Major, 116 E. 58th St., New York.
Boleman, Austin P. Jr., Capt., 1236 Virginia Ave., Bronx.
Bonner, Harold C., Capt., RFD 2, Ovid.
Bottalico, Michael A., Capt., 1931 Haviland Ave., Bronx.
Brahms, Max, Capt., 135 Clarkson Ave., Brooklyn.
Breen, Victor M., Major, 326 Edison St., Buffalo.
Breuder, Andrew B., Major, 200 Sterling St., Brooklyn.
Brody, Michael S., Capt., 925 Ocean Ave., Brooklyn.
Brooks, Louis, Capt., 2745 Reservoir Ave., Bronx.
Bugden, Walter F., Major, Saranac Inn P. O.
Burke, William F., Capt., 160 Middleneck Road, Great Neck.
Burstein, Jacob, Capt., 24 Kane St., Buffalo.
Buttitta, Richard I., Capt., 160 E. 89th St., New York.
Cagan, Aaron, Capt., 278 Crescent St., Brooklyn.
Caravetta, Domenick, Lt. Col., 3042 Grand Concourse, Bronx.
Carroll, Charles T., Major, % Commander V. Carroll, USN, 145 95th St., Brooklyn.
Ceravolo, Raphael J., Major, 7316 14th Avenue, Brooklyn.
Chapman, Ralph R., Capt., 806 Elmwood Ave., Buffalo.
Chieffo, Henry, 1st Lt., 311 Henry St., New York.
Chronis, Leonidas M., Capt., 2215 S. Geddes St., Syracuse.
Collins, Edward F., Capt., 742 E. 9th St., Brooklyn.
Colucci, David D., Major, 48 Wilmer St., Rochester.
Commins, Saul, Capt., 42 Rosedale St., Rochester.
Conti, James P., Capt., 23 Sylvan Road, Rochester.
Cooper, George M., Major, 2961 Bailey Ave., Buffalo.
Couper, John L., Capt., St. Luke's Hospital, New York.
Daly, Joseph P., Major, 30-31 43rd St., Long Island City.
Davidson, Chester L., Lt. Col., 88-20 146th St., Jamaica.
Davis, Donald A., Major, 237 E. 20th St., New York.
Davis, Joseph, Major, 1001 Jerome Ave., New York.
De Gaetano, L. F., Capt., 4616 Ft. Hamilton Pkwy., Brooklyn.

PHYSICIANS SEPARATED FROM SERVICE

New York—Continued

Diasio, Joseph S., Major, 170 E. 94th St., New York.
Diaso, Herbert R., Lt. Col., Onondaga Sanatorium, Syracuse.
Disick, Solomon, Major, 409 Avenue O, Brooklyn.
Dorfmann, Henry L., Capt., 219 E. 12th St., New York.
Dresdale, David T., Capt., 722 W. 168th St., New York.
Dunigan, Jay T., Capt., 98 Willett St., Albany.
Eckmann, Leonard M., Capt., 21 Amberson Ave., Yonkers.
Ehrlich, Jacob W., Lt. Col., 23 Blackthorn Lane, White Plains.
Eichna, Ludwig W., Major, 27 E. 38th St., New York.
Elkind, Mortimer M., Lieut. Col., 634 Empire Blvd., Brooklyn.
Endreny, Emil, Lt. Col., 434 Pelhamdale Ave., Pelham Manor.
Enklewitz, Morris, Capt., 80 E. 210 St., New York.
Feiman, Morris S., Capt., 1585 E. 14th St., Brooklyn.
Feingold, Joseph, Major, 30 East St., Fort Edward.
Fettes, David S., Capt., 325 Highland Blvd., Brooklyn.
Finkel, Milton M., Major, 2610 Glenwood Rd., Brooklyn.
Firestone, Siegfried D., Capt., 579 Oliver St., North Tonawanda.
Fisher, Milton S., Capt., 1495 Madison Ave., New York.
Fox, William, Major, 7920 20th Avenue, Brooklyn.
Franco, Alexander, Capt., 37-14 21st Ave., Long Island City.
Franklin, Murray, Major, 505 Hopkinson Avenue, Brooklyn.
Friedman, Eliot M., Capt., 1434 Genesee St., Utica.
Furlong, Maurice B., Capt., 59 Strathmore, Buffalo.
Gajewski, Matt A., Major, 184 Strauss St., Buffalo.
Garity, Charles J., Capt., 3763 63rd St., Woodside.
Geiger, Ferdinand, Capt., 233 Dewitt St., Syracuse.
Giacini, Angelo C., Capt., 47-01 50th Ave., Woodside.
Giardina, Anthony L., Major, 362 Avenue T, Brooklyn.
Glass, Burt A., Capt., 65 Central Park, West, New York.
Gold, Edwin M., Major, 1901 Avenue N, Brooklyn.
Goldberg, Philip, Capt., 661 Barbey St., Brooklyn.
Goldman, Alexander B., Capt., 111 Van Buren St., Brooklyn.
Goldman, Herbert B., Major, 568 E. 91st St., Brooklyn.
Goldsmith, Herbert S., Capt., 2270 Bathgate Avenue, New York.
Green, Frank M., Major, 912 Cornaga Avenue, Far Rockaway.
Greenfeld, Carl, Capt., 200 Varick St., New York.
Groopman, Samuel F., Major, 29 Fifth Avenue, New York.
Gross, Sidney W., Major, 8 E. 83rd St., New York.
Gross, Stanley, Major, 1574 57th St., Brooklyn.
Halperin, Nathaniel P., Major, 10 Post Ave., New York.
Hanley, Edward P., Capt., 78 Kent St., Albany.
Haskell, Harold G., Major, Firland Farms, Sand Lake.
Head, Joseph A., Major, 314 Waverly Avenue, Syracuse.
Heffer, Ernest T., Major, 395 Ocean Ave., Brooklyn.
Herzog, Henry J., 1st Lt., 217 E. Avenue, Lockport.
Hetzer, Arthur M., Capt., 3241 Perry Avenue, Bronx.
Hewett, Joseph W., 1st Lt., 874 W. Ferry St., Buffalo.
Himelstein, Theodore K., Capt., 588 West End Ave., New York.
Hirsch, Lucien, Capt., 303 Woodbine St., Brooklyn.
Hirst, Henry S., Major, 244 South St., Mechanicville.
Hodges, Richard G., Capt., 96 Haven Avenue, New York.
Holman, Cranston W., Col., 131 E. 66th St., New York.
Holzer, Harry, Capt., 166 E. 82d St., New York.
Irvine, Vernon K., Capt., 3 N. Maple St., Granville.
Jacobs, Benjamin, Capt., 927 Eastern Blvd., Bronx.
Jacobson, Samuel A., Major, 730 Grand Concourse, New York.
Jellinek, Harold L., Capt., 605 W. 170th St., New York.
Kallos, Andrew, Capt., 330 E. 71st St., New York.
Kannengeiser, John J., Major, 195 Euclid Ave., Brooklyn.
Karger, Abraham, Capt., 3215 Netherlands Ave., Bronx.
Kennedy, Robert P., Capt., Knollwood Dr., RFD 1, Rochester.
King, Walter G., Capt., 67 Bennett Ave., Binghamton.
Kingsbury, Clifford A., Capt., Ballston Spa, New York.
Kinne, Edmund R., Capt., 10 Benton Ave., Middletown.
Klein, Abraham, Capt., 735 Empire Blvd., Brooklyn.
Klemann, Gilbert L., Major, 30 Davis Avenue, New Rochelle.
Knitzer, Carl, Capt., 5616 Twelfth Avenue, Brooklyn.
Kramer, Milton, 1st Lt., 39 Auburn Place, Brooklyn.
Kutzman, Nathaniel, Major, 73 Richmond Avenue, Buffalo.
Lambert, Benjamin H., Capt., 1515 Grand Concourse, Bronx.
Langsam, Abraham A., Capt., 182 New York Ave., Brooklyn.
Langsam, David, Major, 2727 Bedford Ave., Brooklyn.
Laquidara, Aurelius A., Capt., 689 2d Ave., Troy.
Leibenhaut, Milton, Major, 1134 St. Johns Place, Brooklyn.
Leventhal, Harry, Capt., 1842 Bryant Avenue, Bronx.
Levine, Herman M., Capt., 2703 Webb Avenue, Bronx.
Levine, Jack, Capt., 200 New York Ave., Brooklyn.
Lewin, Albert L., Capt., 329 Park Avenue, Medina.
Loeb, Harry, Capt., 1416 Ditmas Ave., Brooklyn.
Loebman, David L., Capt., 945 Hoe Ave., Bronx.
Lord, William J., Capt., 559 Park Avenue, Albany.
Luger, Daniel, Capt., 27 E. 94th St., New York.
Maar, Henry R., Capt., 3401 Kingsbridge Ave., New York.

New York—Continued

Mahoney, Daniel P., Capt., 3126 6th Avenue, Troy.
Marshall, Adrian, Capt., 300 Ocean Parkway, Brooklyn.
Meltzer, Philip J., Capt., 194-18 117 Road, St. Albans.
Menter, Philip, Capt., 927 Ackerman Avenue, Syracuse.
Menza, Michael J., Capt., 106 10th St., Buffalo.
Michaels, William J. Jr., Major, 714 Hamilton St., Syracuse.
Milberg, Max B., Capt., 1078 52nd St., Brooklyn.
Mrozek, Emil C., Major, 265 Main St., Binghamton.
Mulholland, John H., Lt. Col., Beechdale Rd., Dobbs Ferry.
Murphy, Joseph P., Capt., 1 Dogwood Dr., Kings Pt., Gt. Neck.
Nadler, Julius, Major, 1526 E. 4th St., Brooklyn.
Nash, Marcus, Major, 1335 Morris Ave., New York.
Neill, Charles L. Jr., Major, 447 E. 65th St., New York.
Newcomb, William F., Capt., 67 N. Main St., Homer.
Newell, Robert B., Major, 285 Kenmore Ave., Kenmore.
Nightingale, Louis M., Major, 71 Ocean Parkway, Brooklyn.
Niles, Charles E., Lt. Col., Station B. Poughkeepsie.
Nixon, Samuel P., Capt., Fairport.
Oakes, Alden B., Lt. Col., Greenpoint Hosp., Brooklyn.
Occhino, Nicholas R., Capt., 351 Floral Avenue, Johnson City.
Paprocki, Theodore F., Capt., 19 Mowbray Ave., Bay Shore.
Perlstein, Jacob, Capt., 225 Beaumont St., Brooklyn.
Pfeifer, Jacob J., Capt., 914 Bay Ridge Parkway, Brooklyn.
Pisani, Joseph M., Capt., 2 Oliver St., New York.
Powers, John J., 1st Lt., 334 Hamilton St., Albany.
Rader, Milton J., Capt., 3302 Avenue N, Brooklyn.
Raifman, Herman M., Capt., 1814 66th St., Brooklyn.
Rakov, Philip H., Capt., 318 Scott Ave., Syracuse.
Reich, George A., Capt., 2324 Barcelona Rd., Schenectady.
Reifer, Paul, Capt., 555 Crown St., Brooklyn.
Resnick, Benjamin, Capt., 546 Colonial Avenue, Pelham Manor.
Richard, Donat R., 1st Lt., 100 E. 38th St., Brooklyn.
Richards, Maxwell C., Capt., 2016 Regent Place, Brooklyn.
Ritchie, Saul, Lt. Col., 361 Broadway, Kingston.
Robbins, Joseph V., 1st Lt., 111 E. Main St., Port Jervis.
Roberts, William G., Major, 40 Chestnut Avenue, Dansville.
Robin, Percival A., Major, 131 Fulton Avenue, Hempstead.
Rock, Joseph, Capt., 17 Vienna St., Rochester.
Rosen, Bernard, Capt., Box 127, Lake Mohegan.
Rosenberg, Carl C., Capt., 2047 Nostrand Avenue, Brooklyn.
Rosenthal, Benjamin, Capt., 2111 Albemarle Road, Brooklyn.
Ross, Nathan E., Capt., 28-30 34th St., Long Island City.
Rubin, Abraham, Major, 1190 Shakespeare Avenue, Bronx.
Rubinson, Helman J., Capt., 556 Westmoreland Ave., Syracuse.
Rudick, Morris D., 1st Lt., 43-09 47th Avenue, Long Island City.
Rudoy, Martin, Capt., 174 Woodruff Avenue, Brooklyn.
Ruggiero, Wilfred F., Major, 26 Temple Court, Brooklyn.
Rush, Martin R., Capt., 1454 Ocean Avenue, Brooklyn.
Sack, Samuel S., Lt. Col., 1303 122nd St., College Point.
Savoia, Domenico A., Capt., 115-05 114th Avenue, Ozone Park.
Sayet, Maxwell M., Capt., 1166 Grand Concourse, New York.
Schott, Jacob, Capt., 612 Argyle Road, Brooklyn.
Seaman, George J., Capt., 163 Ocean Avenue, Brooklyn.
Severance, Fayette D., Major, 39 Court St., Canton.
Sherry, Solomon, Capt., 1331 Franklin Ave., Bronx.
Siegel, Irving M., Capt., 35 E. 9th St., New York.
Simon, Milton, Capt., 9355 71 Drive, Forest Hills.
Sloand, Anthony S., Major, 200 Main St., Springville.
Sobel, Raymond, Major, Circular Road, Poughkeepsie.
Solomon, Nathaniel H., Capt., 62-65 Saunders St., Rego Park.
Sommers, Sidney, Capt., 2264 Creston Ave., Bronx.
Spota, George, 1st Lt., 777 Grote St., Bronx.
Stewart, Charles F., Capt., 25 Maple Dr., Great Neck.
Strauss, Joseph R., Capt., 38-05 65th St., Woodside, L. I.
Strosberg, Irving, 1st Lt., 40 Ferry St., Troy.
Suratt, Theodore P., Major, State Hospital, Central Islip.
Swersie, Allan K., Capt., 229 W. 78th St., New York.
Tarner, Arnold M., Capt., 676 Richmond Avenue, Buffalo.
Tarter, Solomon S., Capt., 124 Remsen St., Brooklyn.
Teicher, Ira, Major, 565 Fifth St., Brooklyn.
Tepper, Julius, Capt., 42-15 43rd Ave., Sunnyside, L. I.
Thwaite, Walter G., Capt., Kings Co. Hosp., Brooklyn.
Tidona, John J., Capt., 7501 17th Avenue, Brooklyn.
Towlen, Ralph M., Major, 65 Maple Avenue, Patchogue.
Vought, Robert L., Lt. Col., 601 Hotel Jamestown Bldg., Jamestown.
Wechsler, Harry F., Lt. Col., 55 E. 86th St., New York.
Weiner, Aaron A., Capt., 2084 61st St., Brooklyn.
Wexler, Nathan H., Major, 562 Alabama Avenue, Brooklyn.
Zuckerman, Hyman, Major, 788 Howard Ave., Brooklyn.
Zuckerman, Isidore C., Major, 3523 Fillmore Ave., Brooklyn.
Zugsmith, George S., 1st Lt., 210 E. 64th St., New York.
Zwerling, Morton H., 1st Lt., 64-39 98th St., Forest Hills.

PHYSICIANS SEPARATED FROM SERVICE

North Carolina

Armistead, Drury B., Capt., 302 Greene St., Greenville.
Edgerton, Glenn S., Major, 612 Mulberry St., Statesville.
Elliott, John P., Capt., Fuquay Springs.
Forth, Paul T., Capt., 1011 Lamond Ave., Durham.
Jacobs, Julian E., Major, 121 W. 7th St., Charlotte.
Jones, Thomas T., Major, 1919 Club Blvd., Durham.
Marshall, James F., Lt. Col., 645 Arbor Rd., Winston-Salem.
May, William P., Lt. Col., 310 W. 4th St., Winston-Salem.
Naumoff, Philip, Capt., 704 Independence Bldg., Charlotte.
Pearson, Arthur A., Capt., Mountain Sanatorium, Fletcher.
Peasley, Elmus D., Major, Rex Hosp., Raleigh.
Plyler, Ralph J., Major, 611 Mocksville Ave., Salisbury.
Rand, Emmett G., Lt. Col., 1520 Jarvis St., Raleigh.
Raper, James S., Capt., 133 W. 1st Ave., Lexington.
Roberts, Roy F., Lt. Col., 15 N. Kensington Rd., Asheville.
Stephenson, B. E., Lt. Col., 701 Madison St., Roanoke Rapids.
Ward, Walter E., Capt., Robersonville.
Whitaker, Donald N., Capt., Asheboro.
White, Thomas P., Col., 714 Edgehill Rd., N., Charlotte.
Whitt, Walter Fuller Jr., 1st Lt., 329 Maupin Ave., Salisbury.
Wrenn, Creighton, 1st Lt., Stewart Ave., Mooresville.

North Dakota

Currie, Kenneth P., Capt., Cando.

Ohio

Adelman, Jack A., Major, 719 Sheridan Ave., Columbus.
Alberts, Edward, Major, 3978 Warwick Ave., Cincinnati.
Allison, Robert T. Jr., Lt. Col., 69 N. Highland Ave., Akron.
Altmaier, Clovis J., Capt., 247 S. State St., Marion.
Andrus, Frederick H., Major, 291 Edgerton Ct., Akron.
Baker, Calvin L., Major, 314 W. Main St., Cridersville.
Barber, Cecil F., Major, Felicity.
Barton, Paul F., 1st Lt., 116 E. Church St., Galion.
Baumgartner, Myron R., Capt., Bolivar.
Beery, William R., Capt., 184 E. Frambes Ave., Columbus.
Betts, Thomas F., Capt., 438 Tiffin Ave., Findlay.
Beyer, Millard C., Major, 230 W. Fairlawn Blvd., Akron.
Blanton, Gerald W., Capt., State Hospital, Athens.
Briola, Patsie F., Lt. Col., 3308 W. 111th St., Cleveland.
Brown, Arthur A., Lt. Col., Box 375, Canal Fulton.
Brown, Harry G., Major, 5647 Hamilton Ave., Cincinnati.
Brown, Louis E. Jr., Lt. Col., 727 Dorchester Rd., Akron.
Brown, Stanley E., Capt., 10022 Westchester Ave., Cleveland.
Buchanan, John R., Capt., 743 Anoka Lane, Youngstown.
Bushman, John G., Capt., Avon Lake.
Canter, Joseph M., Capt., 564 Diagonal Rd., Akron.
Carlisle, Richard C., Major, 882 Ann St., Columbus.
Carmichael, Josiah C., Capt., Lutheran Hospital, Cleveland.
Carnes, James A., Capt., 515 Federal Avenue, Massillon.
Cavanaugh, Harold N., Lt. Col., 406 Benson St., Reading.
Cellar, Frank A. Jr., Capt., 2803 Gilbert Ave., Cincinnati.
Curran, Thomas R., Major, 1589 E. Main St., Columbus.
Davis, Alexander N., Major, 56 Watervliet Ave., Dayton.
Dougherty, John E., Lt. Col., 934 McKinley Ave., Canton.
Dowell, Charles H., Capt., 207 W. Main St., Carrollton.
Dowling, James R., Major, 106 11th St., N.E., Massillon.
Earley, Daniel E., Major, 5956 Belmont Ave., Cincinnati.
Elliott, Harold B., Capt., 1766 Pembrook Rd., Springfield.
Engelman, Elmer D., Capt., 81 W. 2d St., Chillicothe.
Fabing, Howard D., Major, Conner's Landing, New Richmond.
Freedman, Arthur, Capt., 410 Catherine St., Cincinnati.
Gall, Edward A., Major, 2344 Ashland Ave., Cincinnati.
George, Walter L., Major, 1860 E. 90th St., Cleveland.
Gerlinger, Theodore V., Major, 119 Dale Ave., Willard.
Goldcamp, John S., Major, 810 Dollar Bank Bldg., Youngstown.
Grubbs, William E., Capt., 421 Union Ave., Steubenville.
Hudson, Charles L., Major, 1500 Crest Rd., Cleveland Heights.
Hunter, Curwood R., Capt., 1979 Dalewood Pl., Cincinnati.
Jauch, Roland S., Lt. Col., 20874 Morewood Parkway, Rocky River.
Johnson, Herbert C., Major, 300 N. Mulberry, Mt. Vernon.
Johnson, James B. Jr., Capt., 19 E. Locust St., Newark.
Kane, Maurice M., Lt. Col., 423½ S. Broadway, Greenville.
Kessel, Sol, Capt., 522 Forest Avenue, Cincinnati.
Krause, George R., Lt. Col., 7911 Detroit Avenue, Cleveland.
Lederer, Henry D., Capt., 515 Melish Ave., Cincinnati.
Leichliter, John W., Lt. Col., 2123 Auburn Ave., Cincinnati.
Lohr, Lawrence J., Capt., Dayton.
McClure, Jasper R., Capt., 251 Hosea Avenue, Cincinnati.
Marinelli, Adolphus C., Lt. Col., 157 Upland Ave., Youngstown.
Markey, Robert C., Capt., 2608 Marcella Ave., Dayton.
Overs, Paul F., Capt., Spencer.

Ohio—Continued

Permut, Samuel R., Capt., 3692 Berkeley Rd., Cleveland Hgts.
Picard, Gustav G., Capt., 10616 Euclid Ave., Cleveland.
Quinn, Gerald W., Capt., 524 Dorchester Road, Akron.
Ramsayer, Herbert P., Capt., 715 21st St. N.E., Canton.
Rilling, Reginald S., Major, 125 Glendale Ave., Findlay.
Rodenberg, Elmer J., Major, Starling-Loving University Hospital, Columbus.
Rose, James E., Capt., 226 N. Spring St., Wilmington.
Rosenblum, Max H., Capt., 916 Woodlawn Rd., Steubenville.
Rosenbaum, Joseph G., Capt., N. Royalton, Brecksville.
Scaggs, William E., Capt., 2835 Willow Way, Portsmouth.
Schaal, James A. D., Capt., 4105 Glenway Ave., Cincinnati.
Schillinger, Edward N., Lt. Col., Vet. Adm. Facility, Dayton.
Schork, Rudolph J., Lt. Col., 333 4th St., Elyria.
Seymour, Miner W., Major, 2313 Berwick Blvd., Columbus.
Simon, Stanley D., Major, 3976 Beechwood Ave., Cincinnati.
Solomon, Walter M., Lt. Col., 15706 Chadbourne Road, Shaker Heights.
Steele, Wendell M., Major, 17 E. Locust St., Newark.
Stevenson, Jean M., Lt. Col., General Hospital, Cincinnati.
Thomas, James D., Capt., 160½ W. Northwood Ave., Columbus.
Troup, Paul, Major, 108 E. Siebenthaler Ave., Dayton.
Tsaloff, Nicholas M., Major, 639 Crestview, Akron.
Ulicny, Karl S., Capt., Lucas County Hosp., Toledo.
Ulin, Louis, Capt., Huron Road Hospital, East Cleveland.
Underwood, Homer D., Capt., 214 S. Shannon St., Van Wert.
Van Horn, Earl C., Major, 570 E. Northern Ave., Springfield.
Wallace, Richard H., Major, 35 S. Stanwood Rd., Columbus.
Ward, William R., Major, 1218 Lind St., Middletown.
Wilson, Sloan, J., Lt. Col., 1487 Belmont Ave., Columbus.
Zipf, Robert E., Capt., 2157 Salem Ave., Dayton.

Oklahoma

Atkins, Paul N. Jr., Major, 1239 S. Owassa, Tulsa.
Baker, John H. Jr., 1st Lt., 315 Main St, Eufaula.
Bell, Austin H., Major, 301 N.W., 12th St., Oklahoma City.
Curry, James F., Capt., 1305 E. Fairview, Sapulpa.
Epps, Curtis H., Major, 800 N.E. 13th St., Oklahoma City.
Farrell, Chester H., Major, 810 S. Williams St., El Reno.
Herrmann, Jess D., Major, 117 N. Broadway, Oklahoma City.
Lemon, Cecil W., Capt., 2304 N.W. 25th, Oklahoma City.
McClellan, Charles W., Capt., 305 E. 3d St., Claremore.
Neely, Shade D., Capt., 236 N. 17th St., Muskogee.
Pickhardt, W. L., Capt., Creek Co. Health Dept., Sapulpa.
Royce, Owen B., Major, 800 N. E. 13th St., Oklahoma City.
Salkeld, Phil L., Capt., % Dr. F. M. Adams, Box 69, Vinita.
Schaff, Hartzell V., Capt., 810 N. Burgess, Holdenville.
Starkey, Wayne A., Lt. Col., 315 E. Commerce St., Altus.
Taylor, John R., Capt., 1106 S. 7th St., Kingfisher.
Wadsworth, Ray M., Capt., % C. H. Hubbard, Sand Springs.
Wolff, Eugene G., Major, 1742 S. Wheeling, Tulsa.

Oregon

Currin, Hugh B., Capt., 1991 Van Ness St., Klamath Falls.
Himmelfarb, Max, Capt., 3462 N.E. Pacific St., Portland.
Jones, Arthur C., Capt., 3300 S.W. Heather Lane, Portland.
Reichle, Raymond M., Capt., 4132 N.E. 6th Ave., Portland.
Ruedy, Verner E., Major, 3205 S.W. Corbett Ave., Portland.
Sandlin, Dean C., Capt, Good Samaritan Hosp., Portland.
Singer, Isadore M., Capt., 2212 S.W. 2d Ave., Portland.
Swansen, Merle H., Major, 2029 LeRoy St., Klamath Falls.

Pennsylvania

Anastasia, John J., Capt., 635 High St., Pottstown.
Aronson, Roland S., Lt. Col., 1101 N. 63d St., Philadelphia.
Bair, Victor W., Capt., 728 Broad Ave., Belle Vernon.
Battafarano, Leonard A., Capt., 5556 Lansdowne, Philadelphia.
Bigley, Joseph R., Major, 2105 E. Huntingdon St., Philadelphia.
Blaine, Belford C., Capt., 206 W. Market St., Pottsville.
Blank, Philip, Major, 3028 Brownsville Road, Pittsburgh.
Bonacci, Richard J., Capt., Market St., Tresckow.
Boucek, Richard J., Major, 4320 Perrysville Rd., Pittsburgh.
Boyce, Bingham, Col., 527 Station St., Bridgeville.
Brader, Reid B., Capt., 254 E. Main St., Nanticoke.
Bringhurst, Louis S., Major, 5 W. Biddle St., West Chester.
Brody, Morris W., Capt., 2644 Sorento Road, Philadelphia.
Brooks, David, Capt., 310 N. 11th St., Reading.
Cahn, Milton M., 1st Lt., 317 Gladstone St., Philadelphia.
Campbell, Thomas A., Lt. Col., 3422 York Rd., Philadelphia.
Canter, Donald, Capt., 1401 S. 12th St., Philadelphia.
Capalbo, Sylvester A., Capt., 1512 S. 9th St., Philadelphia.
Carter, Herbert G., Capt., 519 Main St., Pennsburg.

PHYSICIANS SEPARATED FROM SERVICE

Pennsylvania—Continued

Cattanach, Lachlan McA., Capt., 96 S. Franklin St., Wilkes-Barre.
Chollak, Joseph P., Capt., 786 Main St., Edwardsville.
Chunn, Livingston, Capt., 224 N. 10th St., Philadelphia.
Cohen, Morris, Capt., 2506 Center Avenue, Pittsburgh.
Clark, Joseph G., Major, 344 W. Union St., West Chester.
Deibert, Edward B., Capt., 1406 Main St., Hellertown.
Deibert, Glenn A. H., Capt., 811 N. 5th St., Reading.
Demoise, Peter F., Capt., RD 5, Greensburg.
Detuerk, John J., Capt., Jefferson Hosp., Philadelphia.
Duane, William Jr., Capt., 1928 DeLancey Pl., Philadelphia.
DeWoody, Gerald McD., Capt., Duke Center.
Donaldson, James O. Jr., Capt., 510 E. Brady St., Butler.
Dostal, Francis P., Capt., 300 Greeve St., Conemaugh.
Dugan, Charles R., Capt., 1824 E. Schiller St., Philadelphia.
Edwards, Thomson, Major, 703 Lindale Avenue, Drexel Hill.
Eisenberg, Richard B., Major, 1418 Pearce Park, Erie.
Eisenhower, Charles E., Major, Hosp. of U. of Pa., Philadelphia.
Elicker, Charles R., Major, 151 N. Hanover St., Pottstown.
Emmerling, John F., Major, 515 S. Aiken Ave. E.E., Pittsburgh.
Ettenger, Morris S., 1st Lt., 5544 Lansdowne Ave., Philadelphia.
Ewing, David Q., Major, 400 S. 45th St., Philadelphia.
Fair, Jacob C., Capt., 249 Arch St., Kittanning.
Fiedler, Roy W., Capt., 209 Olympia St., Pittsburgh.
Finkelman, Samuel, Capt., 413 Littlecroft Rd., Upper Darby.
Finkelstein, David, Capt., 301 S. 63d St., Philadelphia.
Flanigan, Edward A. Jr., Capt., 13 Valley St., New Philadelphia.
Flick, L. F. III, Capt., Montgomery Ct. Apt., L 13, Narberth.
Forsyth, Robert L., Capt., 7526 Edgerton Ave., Pittsburgh.
Freedman, Howard, Capt., 4763 N. 10th St., Philadelphia.
Fretz, Howard Z., Capt., 1207 W. Erie Ave., Philadelphia.
Gerth, Eugene W., Major, 114 S. 6th St., Columbia.
Gibbon, John H. Jr., Lt. Col., 4035 Pine St., Philadelphia.
Gleason, George E., Capt., 300 Luzerne St., Johnstown.
Goeringer, Clare F., Major, 55 S. Washington, Wilkes-Barre.
Gribb, Joseph C., Capt., 1509 Market St., Harrisburg.
Grim, Mark D., Capt., Oley.
Hain, Howard L., Capt., 21 W. Main St., Annville.
Hammer, Samuel F., Major, 609 Maplewood, Ambridge.
Hauer, Adam M., Capt., 320 Cumberland St., Lebanon.
Hearn, William P. Jr., Capt., 440 Woodbine Ave., Narberth.
Herron, Frank T., Capt., 3708 5th Avenue, Pittsburgh.
Hieber, George F., Capt., Perrysville.
Hotham, Harland DeV. Jr., Capt., 327 Fourth St., Freeport.
Jacobson, Robert M., Major, 220 Pine St., Punxsutawney.
Jaczack, Sigmund M., Capt., 211 E. Broad St., Tamaqua.
Jahnig, Richard P., Capt., 118 Spring St., Reading.
Janjigian, Robert R., Major, 1043 Wyoming Ave., Forty Fort.
Kameen, Anthony J., Capt., 826 N. Main St., Forest City.
Kane, James A., Major, 223 Wolf St., Philadelphia.
Katz, Benjamin R., Capt., 200 N. 52d St., Philadelphia.
Kielty, John T., Capt., 12 Main St., Towanda.
King, Orville C., Lt. Col., 255 S. 17th St., Philadelphia.
Knoch, Henry R., Capt., 545 W. King St., York.
Koebert, Martin J., Maj., 1847 E. Allegheny Ave., Philadelphia.
Krall, John T., Major, 134 Lansdowne Ct., Lansdowne.
Kreger, Oliver J. Jr., Capt., 35 McKee Ave., Monessen.
Kretz, Stewart F., Capt., 4636 Center Avenue, Pittsburgh.
Kuty, Eugene J., Capt., 422 Wyandotte, Bethlehem.
Laplace, Louis B., Lt. Col., 1900 Rittenhouse Sq., Philadelphia.
Larkin, Walter J., Lt. Col., 320 W. Market St., Scranton.
Latham, Kent G., Major, 301 Jenkins Bldg., Pittsburgh.
Leber, Alfred P., Capt., 121 McKinley Ave., Lansdowne.
Leisawitz, Paul A., Capt., 36 N. 11th St., Reading.
Lerner, Joseph, 1st Lt., Waterloo Ave., Berwyn.
Liberace, Ettore V., Major, 1315 Main St., Darby.
Lohmann, John, Capt., 1211 Oram St., Scranton.
Lorusso, N. A., Capt., 174 E. Northampton St., Wilkes-Barre.
Lussier, Arthur H., Major, 6441 Jackson St., Pittsburgh.
MacMinn, Charles C. Jr., Major, Lincoln Way East, New Oxford.
Mainzer, Francis S., Major, 725 Wash. St., Huntington.
Mangold, Francis N., Major, 11 N. Chestnut St., Scottdale.
Markley, William M., Capt., Lamberton.
Martin, Christine A., Capt., Phila. General Hosp., Philadelphia.
Martin, Frederick H., Major, RFD, Macungie.
Moir, John A., Major, 6417 Windsor Ave., Philadelphia.
Moylan, Robert E., Capt., 115 N. Main Ave., Scranton.
Nealon, William K., Capt., 226 S. Aiken Ave., Pittsburgh.
Nelowet, Erwin J., Capt., 19 W. Fornance St., Norristown.
O'Donnell, Ward M., Capt., 602 James St., Hazleton.
Oetting, Edward M., 1st Lt., 407 Whitney Ave., Pittsburgh.
Owens, Hobart N., Capt., 416 Church St., Hadley.

Pennsylvania—Continued

Parker, William S., Lt. Col., 2918 Haverford Rd., Ardmore.
Pearlman, William, Capt., 68 S. Washington St., Wilkes-Barre.
Peterson, Charles B. Jr., Capt., 203 S. Queen, Lancaster.
Petree, Paul A., Lt. Col., Harrisburg State Hosp., Harrisburg.
Pomeroy, James M., Capt., 9th Barclay St., Chester.
Redfield, Ronald L., Major, 21 Center St., Oil City.
Reinheimer, Kenneth G., Capt., Bridge St., Weissport.
Reppun, John T. F., Capt., 137 W. 9th Ave., Homestead.
Reyer, William A., Capt., 123 Hazen Place, Sharon.
Rittenhouse, Frank H., Capt., 600 Bank St., Bridgeville.
Robinson, Joseph, 1st Lt., 183 3d Ave., Kingston.
Roeder, Paul H., Capt., 1401 Westwood Lane, Overbrook, Philadelphia.
Rogers, William H. III, Capt., 308 Walnut St., Spring City.
Romanow, Peter W., Major, 810 E. Allegheny, Philadelphia.
Rupp, Joseph J., Capt., 2207 Jackson St., Scranton.
Ryscavage, Edward T., Capt., 100 S. Second St., St. Clair.
Schifalacqua, Philip A., 1st Lt., 1618 S. 12th St., Philadelphia.
Schmidt, Ralph E., Major, 2148 Union Ave., Wesleyville.
Schubart, George R., Capt., 2265 Garrett Rd., Drexel Hill.
Smaltz, John E., Lt. Col., 36 E. Baltimore Ave., Media.
Spector, Samuel S., Capt., 304 N. High St., West Chester.
Stiles, Merritt H., Lt. Col., 113 W. Chestnut Hill, Philadelphia.
Stirling, Warren, Col., 14 Kathmere Road, Havertown.
Stockton, Harry T., Capt., 5 Henderson Avenue, Ridley Park.
Taylor, James T., Lt. Col., 936 Ferndale Ave., Johnstown.
Templeton, Frederick G., Major, 108 East St., Warren.
Thompson, Thomas E. Jr., Major, 718 California Ave., Avalon.
Toloff, Edward M., Capt., 3863 Beechwood Blvd., Pittsburgh.
Trexler, Clifford H., Major, RFD 1, Mertztown.
Updegraff, William C., Capt., 2707 Brownsville Rd., Pittsburgh.
Vilsack, George R., Major, 1516 Beechwood Blvd., Pittsburgh.
Vitullo, Nicholas J., Capt., 1314 S. Broad St., Philadelphia.
Wagner, Ira G. Jr., Lt. Col., 301 W. Main St., Ephrata.
Weisser, Charles W., Capt., 5827 Elwood Gardens, Pittsburgh.

Rhode Island

Chafee, Francis H., Major, 12 Humboldt Ave., Providence.
Crank, Rawser P., Major, 794 Park Ave., Cranston.
Croce, Gene A., Capt., 111 Waverly St., Providence.
Cutts, Frank B., Lt. Col., 378 Rochambeau Ave., Providence.
Donahue, John J., Capt., 115 Beckwith St., Cranston.
Murphy, Robert G., Major, 428 Lloyd Ave., Providence.
Normandin, L. A., Lt. Col., 240 Taunton Ave., East Providence.
Sharp, Benjamin S., Major, 245 Freeman Pky., Providence.
Speidel, Glenn P., Capt., 28 Slater Ave., Providence.

South Carolina

Chamberlain, Olin B., Col., 95 Rutledge Ave., Charleston.
Edwards, William W., Lt. Col., Professional Bldg., Greenville.
Evans, William Jr., Capt., 901 E. Main, Bennettsville.
Gaston, Frank P., Capt., Rock Hill.
Jeanes, Robert P., Major, 1 Liberty Dr., Easley.
Robinson, John F., Major, 627 N. Fant St., Anderson.
Weinstein, Howard I., Capt., 264 Broad St., Sumter.

South Dakota

Adams, Harold P., Capt., 450 Dakota South, Huron.
O'Connor, Sylvester J., Capt., Burbank.

Tennessee

Buchner, Edward F. Jr., Major, 2917 Sunbeam, Chattanooga.
Cardwell, Edward S. Jr., Lt. Col., U. of Tenn., Memphis.
Freeman, Paul R., Capt., 1139 Madison Ave., Memphis.
Goldsmith, Lester I., Capt., 1386 Vinton Ave., Memphis.
Hayward, Joseph C., Major, 707 Georgia Ave., Chattanooga.
Livingston, Philip H., Major, Road House, Chattanooga.
Miller, Richard W., Capt., 2410 Autumn, Memphis.
Nave, Dick D., Capt., Mountain City.
Nichols, Ralph G., Capt., 518 W. Atlantic Ave., Knoxville.
Patterson, Joseph H., Major, Vanderbilt Hosp., Nashville.
Read, Charles T., Capt., 403 Fleetwood Dr., Lookout Mt.
Roberts, Richard H., Capt., 209 31st Ave. N., Nashville.
Rosenfeld, Louis, Capt., Vanderbilt Univ. Hosp., Nashville.
Sams, James M., Capt., 214 Love St., Erwin.
Sohm, John J., Major, 1035 Jefferson Ave., Memphis.
Sulman, Sam N., Capt., Baroness Erlanger Hosp., Chattanooga.
Sumpter, William D. Jr., Capt., 1108 19th Ave. S., Nashville.
Talley, Byron S., Lt. Col., 847 Madison Ave., Memphis.
Watson, James E. Jr., Col., 706 Mansfield St., Memphis.
Williams, Cordell H., 1st Lt., 271 Pasadena Pl., Memphis.
Wright, James C., Lt. Col., Med. Arts Bldg., Chattanooga.
Youmans, John B., Col., RFD 5, Nashville.

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PHYSICIANS SEPARATED FROM SERVICE

Texas

Altgelt, Daniel D., Major, 165 Schreiner Pl., San Antonio.
Ault, Charles A. Jr., Lt. Col., 4030 Junius, Dallas.
Bruce, Robert G., Capt., 502 W. Hubbard St., Mineral Wells.
Cody, Melville L., Capt., 1307 Harold St., Houston.
Cohen, Meyer, Capt., 308 Ward St., Marlin.
Compere, Clinton L., Lt. Col., Decatur.
Cooper, Arlin B., Major, Ben Wheeler.
Davenport, Harbert Jr., Lt. Col., 542 Washington, Brownsville.
De Haro, Joseph A., Capt., 4218 Newton, Dallas.
Donoho, Charles P., Capt., 3901 Duval St., Austin.
Eads, Ray A., Major, Uvalde.
Edwards, Robert A., Capt., 20 W. Oak Dr., Houston.
Feener, Lester C., Major, 1202 E. Taylor, Harlingen.
Garcia, Robert E., Major, Falfurrias.
Goddard, Chauncey G., Capt., 1924 Herring Ave., Waco.
Gonzalez, Hesiquio N., Capt., 2115 Saunders Ave., San Antonio.
Henderson, Walter T. Jr., Major, 111 E. Woodin Blvd., Dallas.
Hodde, Herman O., Capt., Box 601, Brenham.
Hurt, Leonard B., Major, 4236 San Carlos Dr., Dallas.
Kreisle, James E., Capt., 811 W. 31st St., Austin.
Kunath, Carl A., Capt., 608 E. Parkway, San Angelo.
Littell, Milton, Capt., 6711 Harrisburg Blvd., Houston.
Matlock, Thomas B., Major, 424 Adams Bldg., Port Arthur.
McCulley, Jacobus D.,Capt., 2334 Tangley Rd., Houston.
Miller, Jarrell E., Capt., 2302 Fresno St., San Antonio.
Mitchell, Harry J. Jr., Capt., 4217 Swiss Ave., Dallas.
Montalvo, Lauro, 1st Lt., Box 58, Zapata.
Norman, Floyd A., Lt. Col., 4585 Belfort Pl., Dallas.
Parks, Walter S. Jr., Capt., 1300 E. Walker St., Breckenridge.
Partain, Jack M., Major, 215 Camden Ave., San Antonio.
Petway, Max E., Major, 6000 Del Rio, Houston.
Prieto, Philip M., Capt., 124 N. Eucalyptus Ave., El Paso.
Richey, Harvey M. Jr., Capt., 1825 Colonial, Waco.
Robertson, Robert C. L., Lt. Col., 615 Hathaway, Houston.
Rodarte, Ruben B., Capt., 501 Porfirio Diaz St., El Paso.
Simons, Jack H., Capt., 590 Avenue J, Newgulf.
Smith, Thomas E., Major, 1110 N. Oak Cliff Blvd., Dallas.
Speck, Carlos D. Jr., Major, 202 E. 9th St., Austin.
Stansell, Paul Q., Lt. Col., 2048 W. Huisache, San Antonio.
Stevenson, Walter H., Col., 614 N. Oregon St., El Paso.
Tester, Lewis K., Major, 1327 MacKenzie St., San Angelo.
Thornton, Elbert Horace E., Capt., Box 139, Odessa.
Ulert, Izaak A., 1st Lt., 1101 Welch, Houston.
Urrutia, Adolfo, Capt., 107 Rosemary, San Antonio.
Wagner, Robert G., Capt., 3210 Enfield Rd., Austin.
Wells, Benjamin B., Major, Temple.
Williams, Charles R., Col., 312 N.W. 2nd St., Mineral Wells.
Williford, Louis E., Major, 504-6 Shell Bldg., Houston.
Wilson, James D., Major, 2011 30th St., Lubbock.
Wright, Carleton C., Capt., Junction.
Yelderman, Gus C., Major, Rosenberg.
Zarsky, Emil P., Capt., Refugio.

Utah

Sevy, V. M., Capt., 735 S. 11th East, Salt Lake City.
Simonson, Eric E., Capt., Castlegate.
Smith, Joseph R., Major, 444 W. 1st St., Provo.

Vermont

Allen, Sinclair T. Jr., Capt., 44 Oak St., Proctor.
Cudlipp, Ralph L. Jr., Capt., 10 Handy Ct., Burlington.
Dente, Gino A., 1st Lt., 387 N. Main St., Barre.
Dente, Nelson J., Capt., 25 S. Main St., Barre.
Rowe, Harry M., Capt., 121 S. Willard St., Burlington.
Seeley, Ralph H. Jr., Capt., 216 Grove St., Rutland.
Wigh, Russell, Major, 74 Colfax St., Newport.

Virginia

Adams, Samuel T., Capt., The Plains.
Arnett, Eugene W. Jr., Capt., 169 Holbrook Ave., Danville.
Crigler, Fielding J., Lt. Col., 104 E. Market St., Charlottesville.
Farber, Herman W., Major, 620 N. Road, Richmond.
Ferrell, George S., Capt., 119 Fredonia Ave., Lynchburg.
Kincheloe, Charles F., Major, 4103 N. 4th St., Arlington.
McAllister, Russell G., Capt., 3217 Seminary Ave., Richmond.
Rucker, Samuel L. Jr., Capt., Moneta.
Snider, George E., Capt., Box 370, Pulaski.

Virginia—Continued

Stratton, E. W. Jr., Major, 206 6th St., N.W., Charlottesville.
Wood, William H. Jr., Major, Fendall Ave., Charlottesville.
Yates, Mumford R., Major, 1105 Overbrook Rd., Petersburg.

Washington

Anderson, Oscar W., Capt., 3211 10th Ave., West Seattle.
Anthony, Marc, Major, 1120 S. Wall St., Spokane.
Austin, Warren R., Capt., 1743 26th Ave. N., Seattle.
Layton, Edwin G., Major, 2471 42d St. W., Seattle.
Lightburne, William J., Major, Palouse.
Lugar, Leland R., 1st Lt., 1310 S. 16th Ave., Yakima.
Walsh, Alton L., Major, Walsh Block, Everett.

West Virginia

Batalion, Abraham L., Capt., Amegle.
Dupuy, Elbert N., Major, 109 S. Kanawha St., Beckley.
England, Welch M., Lt. Col., 1601 23d St., Parkersburg.
Giffin, Theodore C., Capt., 54 N. Main St., Keyser.
Goodhand, Charles L. Jr., Lt. Col., 1130 Market, Parkersburg.
Hager, James L., Capt., 5226 McCorkle Ave. S.E., Charleston.
Jacob, Samuel S. III, Major, Main St., Bethany.
Pettit, Harold S., Capt., 85 S. Kanawho St., Buckhannon.
Revercomb, Paul H., Lt. Col., 2006 Kanawha Ave., Charleston.
Shafer, Cecil W., Major, Parkersburg Rd., Spencer.

Wisconsin

Anderson, Paul D., Capt., 202 Cass St., LaCrosse.
Arnold, William G., Capt., Wittenberg.
Currer, Paul R., Capt., 2779 N. 41st St., Milwaukee.
Finucane, P. J., Lt. Col., Milwaukee Co. Hosp., Wauwatosa.
Foley, Mark E., Capt., St. Nazianz.
Frank, Horace A., Capt., Neillsville.
Freitag, Samuel A., Major, 403 Oakland, Janesville.
Hildebrand, George B., Capt., 125 S. Locust St., Reedsburg.
Jerome, Bourne, Major, 407 Board of Trade Bldg., Superior.
Klepfer, Jefferson F., Major, Central State Hosp., Waupun.
Larrabee, Walter F. Jr., Capt., 504 W. Central, Chippewa Falls.
Meyer, Bertrand W., Capt., Wisconsin Gen. Hosp., Madison.
Morrison, Donald A. R., Lt. Col., Box 31, Oconomowoc.
Reibold, Frank W., Capt., 633 Sheldon St., Madison.
Rogers, Albert F., Capt., 825 N. 33d St., Milwaukee.
Seelman, Alvin G., Capt., 3838 N. Farwell Ave., Milwaukee.
Sheehan, E. T., 1st Lt., 5714 W. Roosevelt Dr., Milwaukee.
Thuerer, George R., Capt., 526 3rd Ave., Baraboo.

Wyoming

Clarke, Edward J., Capt., 2919 Thomas Ave., Cheyenne.
Booth, Louis G., Capt., Sheridan.
Wanner, Jay G., Lt. Col., 817 Bushnell Ave., Rock Springs.
Williams, Nathaniel O., Capt., Vogel Bldg., Cody.

Puerto Rico

Licha, Jose S., Capt., Box 1165, San Juan.
Serra-Chavarry, Jaime, Major, 32 Hernandez St., Santurce.

Canada

Manning, John E., Capt., 1448 Dufferin St., Winsor, Ont.

RECALLED TO ACTIVE DUTY OR NOT RELIEVED

Allen, Kenneth D. A., Col., 452 Metropolitan Bldg., Denver.
Amster, Milton W., Major, 395 Ocean Ave., Brooklyn, N. Y.
Blumberg, J. M., Lt. Col., 3510A Liberty Hgts. Ave., Baltimore.
Boykin, James M., Lt. Col., Taft, Texas.
Connor, Samuel Walter, Lt. Col., Camdenton, Mo.
DePasquale, M. N., Capt., Laurel Ave., E. Northport, N. Y.
Evashwick, G., Major, 23 Prospect St., Turtle Creek, Pa.
Gordon, Hirsch Loeb, Capt., 605 Beech Terrace, Bronx, N. Y.
James, Charles F. Jr., Major, Appomattox, Va.
Kaufman, Maurice, Capt., 231 Park Dr., Boston.
Loeffler, R. W., Major, 4137 S. Wenonah Ave., Berwyn, Ill.
McCarthy, J. S., Capt., 640 Whitney Ave., New Haven, Conn.
Medalia, Leon S., Lt. Col., 78 Bay State Rd., Boston, Mass.
Phillips, C. M., Major, 423 Rigsby Ave., San Antonio, Texas.
Smith, Joseph R., 1st Lt., 303 College St., Paris, Tenn.
Werts, Kenneth George, Capt., Westport, Pa.

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ORGANIZATION SECTION

Official Notes

RESIGNATION OF DR. OLIN WEST; APPOINTMENT OF DR. GEORGE F. LULL AS GENERAL MANAGER AND AS SECRETARY PRO TEM.

Following the resignation of Dr. Olin West as Secretary and General Manager of the American Medical Association, the Board of Trustees has appointed Dr. George F. Lull as General Manager of the Association, beginning April 1, 1946 and has elected him Secretary of the Association until the next annual session of the Association, to fill the unexpired term of Dr. West.

BOARD OF TRUSTEES,
AMERICAN MEDICAL ASSOCIATION,
R. L. SENSENICH, Chairman.

Medical Legislation

MEDICAL BILLS IN CONGRESS

National Medical Research Foundation

Congressman Stevenson, Wisconsin, has introduced H. R. 5715, a bill to establish in the executive branch of the government an independent agency to be known as the National Medical Research Foundation to initiate, conduct and support scientific research with respect to the cause and cure of cancer, poliomyelitis, rheumatic fever, Bright's disease, hay fever, asthma, arthritis, leukemia, encephalitis, arteriosclerosis, aplastic anemia and rheumatic heart disease.

Hospital Construction

H. R. 5407 has passed the House, a bill to grant to the Federal Works Administrator certain powers with respect to site acquisition, building construction and purchase of buildings. When this bill was considered in the House, March 18, Congressman Elliott, California, submitted an amendment authorizing an appropriation of $50,000,000 for use by the Federal Works Administrator in making grants to public and private agencies for the construction of hospital facilities. The amendment was rejected on a point of order made by Congressman Wadsworth, New York.

Commission for the Physically Handicapped

Hearings have been scheduled by a subcommittee of the House Committee on Labor on H. R. 5206, a bill to establish a Federal Commission for the Physically Handicapped in the Department of Labor. The hearings will begin on April 30 and will conclude, it is contemplated, on May 4. This bill, among other things, proposes to transfer to the federal commission to be created all functions of the Office of Vocational Rehabilitation now in the Federal Security Agency. The bill would establish in the commission separate divisions for special work with the deaf, the hard of hearing, cardiac patients, the tuberculous, the poliomyelitic, the epileptic, amputees and any other large or distinct groups of physically handicapped.

Miscellaneous

H. J. Res. 324, introduced by Congressman Norrell, Arkansas, proposes to request the President to issue a proclamation designating the 28th day of October of each year as National Arthritis Day. S. 1914, introduced by Senator Langer, North Dakota, proposes to authorize to be appropriated such sums as may be necessary to enable the Federal Security Administrator to make loans to nonprofit organizations to assist them to finance the construction of domiciliary facilities for the aged or the blind. The House Committee on Military Affairs has favorably reported H. R. 5626, proposing to authorize the Veterans Administration to appoint and employ retired officers without affecting their retired status. The authority to employ retired commissioned or retired warrant officers will be effective for a period of five years.

STATE LEGISLATION

California

Bill Enacted.—S. 3-X has become chapter 129 of the Laws of 1946. It authorizes the acquisition of land and buildings for temporary state hospital facilities, such property to be operated by the department of mental hygiene on a temporary basis as temporary state mental institutions.

Idaho

Bill Enacted.—H. 16-X was approved March 9, 1946. It authorizes an appropriation to the department of public health for the purpose of providing tuberculosis hospitalization and relief.

Kentucky

Bills Passed.—H. 171 passed the senate March 20. It proposes the enactment of a law authorizing the establishment, maintenance and operation of medical service plan corporations. "Medical services" means the "general and usual services rendered and care administered by doctors of medicine." "Participating physician" would mean a "doctor of medicine licensed to practice medicine and surgery in this state under the provisions of the medical practice act" who agrees in writing to perform the services specified by the subscription certificates. H. 300 passed the senate March 15. To amend the law relating to pharmacies and drugs, it proposes to make it unlawful to sell at retail any drug which contains any quantity of aminopyrine, barbituric acid, cinchophen, dinitrophenol, pituitary, sulfanilamide, thallium acetate, thyroid, or their derivatives, or a drug or device the label of which bears a statement that it is to be dispensed or sold only by or on the prescription of a physician, dentist or veterinarian, unless such drug is sold on a written prescription signed by a member of the medical, dental or veterinary profession who is licensed by law to administer such drug or device, and its label bears the name and place of business of the seller, the serial number and date of such prescription, and the name of such member of the medical, dental or veterinary profession. S. 152 passed the senate March 13. To amend the law relating to the practice of pharmacy, it proposes that any one who, while in the service of the armed forces, was regularly employed for a period of not less than twelve months in the preparation and dispensing of drugs and medicines and who, in addition thereto, has successfully completed at least two years of study in a recognized college of pharmacy may apply for a pharmacist's license.

Mississippi

Bills Introduced.—H. 699 was previously reported as proposing to authorize the state board of examiners to proceed by injunction to prohibit any person from practicing any profession licensed under the supervision of said board when such person is not duly licensed so to practice. This bill was amended in the house on March 14 by proposing to exempt from its provisions persons practicing chiropractic, osteopathic or veterinary sciences. H. 893, to amend the law relating to ad valorem taxes, proposes to exempt from such tax all plants manufacturing, processing or preparing dentifrices, medicines, drugs or pharmaceuticals. H. 974 proposes an appropriation for the purpose of providing a site for the construction and erection of

a general children's hospital for the care and treatment of sick, injured and infirm children and children who are the victims of infantile paralysis or other crippling diseases or infirmities. H. 1016 proposes that any student nurse who takes training provided for nurses in any hospital in the state, supported in whole or in part by state funds having a registered nurse in charge, is authorized to take the examination to become a registered nurse, and if a passing grade is made on such examination such a student nurse is entitled to all rights and benefits now provided for registered nurses. S. 414, relating to the transport of intoxicating liquor into the state, proposes to authorize the issuance of permits for the importation of alcohol for scientific or mechanical purposes by and to such scientific institutions, universities and colleges as are authorized to secure the same free of tax under the laws of the United States and alcohol by and to hospitals and sanatoriums for medical use in such hospitals and sanatoriums, and for the importation and transportation of alcohol to and by any apothecary, druggist, pharmacist or manufacturing agency who shall need the same for such purpose.

Bills Passed.—H. 72 passed the senate March 19. It proposes the creation of a four year medical school as a department of the University of Mississippi which shall be operated as a class A medical school in accordance with the "Council of Medical Education" of the American Medical Association. H. 994 passed the house March 20. It proposes an appropriation to be used and expended by the state board of health and the state department of education in cooperation with the international health division of the Rockefeller Foundation and the general education board, respectively, in carrying out a program of coordinated school, health and nutrition services. S. 181 passed the senate March 13. To amend the law relating to the issuance of marriage licenses, it proposes that both parties applying for a license to marry shall submit to a thorough medical examination by an active licensed physician in Mississippi, by a physician licensed to practice in any or all of the other states of the Union or the District of Columbia, by a commissioned medical officer on active duty in the armed forces of the United States or by a medical officer of the United States Public Health Service, provided said medical examination may be made free of charge by any full time county health officer licensed to practice medicine in Mississippi if the person examined is unable to pay for same. Medical examinations would include a standard serologic test or tests for syphilis.

Missouri

Bills Passed.—S. 343 passed the senate March 12. It proposes the creation of a bipartisan board of six members to be known as the Missouri State Board of Medical Examination and Registration to register and license persons for the practice of medicine and surgery, midwifery and chiropody, and proposes further to transfer the records now in the possession of the department of medical licensure of the state board of health of Missouri to the Missouri State Board of Medical Examination and Registration. S. 433 passed the senate March 19. It proposes to transfer to the state board of chiropody certain powers relating to licensing and registration of practitioners heretofore vested in the state board of health. S. 434 passed the senate March 19. Relating to the licensing of midwives, it proposes to transfer to the division of registration and examination of the state department of education certain powers heretofore vested in the state department of health. S. 456 passed the senate March 19. It proposes the creation of a division of the state department of education to be known as the division of registration and examination and assigns as boards of said division the state board of medical examiners, state board of osteopathic registration and examinations, state board of chiropractic examiners and others.

New Jersey

Bill Passed.—A. 164 passed the assembly March 19. To amend the medical practice act, it proposes an addition to the board of medical examiners of a chiropodist to have equal rights and privileges in all matters affecting chiropody.

Bills Enacted.—A. C. R. 3 was filed with the secretary of state February 11. The adopted resolution proposes the enactment of an unemployment sickness compensation law and submits a proposal to the legislature constituting such a law. A. 69 has become chapter 22 of the Laws of 1946. It authorizes the establishment and maintenance of blood banks to collect, process, store and distribute human blood and the various human blood derivatives, including special therapeutic and diagnostic serums which are deemed of value in the treatment of sick and injured persons and the prevention of certain diseases.

New York

Bills Introduced.—A. 2274 and S. 1998, to amend the public health law, propose provisions governing the furnishing of care and treatment to persons suffering from tuberculosis and diagnostic tests, studies and analyses for the discovery of tuberculosis, without cost or charge to any resident of the state who is suffering from tuberculosis or is suspected of having tuberculosis. A. 2524 is similar to S. 2038, previously reported. To amend the labor law, it proposes the enactment of a disability benefit law. A. 2578 is similar to S. 2238, previously reported. To amend the insurance law, it proposes to remove therefrom the general prohibition against authorizing foreign or alien medical expense indemnity or hospital service corporations from doing business in the state. A. 2580, to amend the education law, proposes the creation by the commissioner of education of a division of psychology to consider curricular adjustments for superior and/or handicapped students. A. 2582, to amend the education law, proposes the granting of a license to practice physiotherapy without examination to persons showing a certificate of honorable discharge from the United States army, navy or marine corps and presenting to the department evidence that at the time of entrance into the military service he was a resident of the state and a graduate in good standing of a legally chartered school or college in the United States teaching physiotherapy, which school required a course of study equivalent to four years of seven months each. A. 2653 and S. 2260 propose the creation of a temporary state commission to make a study and survey of the prevalence and facilities for the treatment of cancer cases within the state. A. 2654 and S. 2218 propose an appropriation to Cornell University for the use of the memorial cancer center fund for cancer research and for the treatment, prevention and care of cancer and allied diseases. A. 2686, to amend the labor law, proposes to redefine the term "total unemployment" to mean the total lack of any employment on any day, caused by the inability of a claimant who is capable of and available for work to engage in his usual employment or in any other form for which he is reasonably fitted by training and experience, except for total lack of any employment on any day or succession of days on account of a condition of pregnancy attested or certified in writing by an attending physician within such time and in such manner as the commissioner shall prescribe, to the extent that such lack of employment on account of a condition of pregnancy is not compensable under any plan or system of benefits or compensation established by the employer. S. 2087 is similar to A. 2377, previously reported. It proposes to authorize corporations organized under the consumers' cooperative stock corporation law for the purpose of furnishing medical expense indemnity service to persons who become subscribers under contracts with such corporations to reincorporate under the membership corporations law. S. 2123 is similar to A. 2395, previously reported. Relating to the creation of a nutrition council, it proposes the creation of a state nutrition council to coordinate all the state's nutritional activities; conduct research or allocate a portion of its funds for research in nutrition; recommend reorganization of the state's nutritional activities; launch a widescale advertising, publicity and promotional campaign of instruction of the elements constituting a sound diet and the proper use of such farm products as may become surplus from time to time; and to do such other things as the council may deem essential for improving the nutritional status of the people.

Bills Passed.—A. 1973 passed the assembly March 13 and the senate March 18. To amend the state licensing law, it proposes that persons lawfully inducted into the military service who were licentiates under the state law at the time of their induction may apply for a renewal of their license within three months of discharge from the service or within three months of

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discharge from any period of hospitalization in a facility maintained by the United States Veterans Administration. A. 1974 passed the assembly March 13 and the senate March 18. To amend the state licensing law, it proposes to postpone from July 1946 to July 1947 the time during which previous licentiates whose licenses lapsed during military service may have a renewal license without examination. A. 2083 passed the assembly March 18. It proposes to extend the life of the temporary state commission previously appointed to formulate a long-range health program from March 1946 to March 1947. S. 577 passed the assembly March 13. To amend the workmen's compensation law, it proposes that physician members of the industrial council shall not be eligible for authorization to render medical aid under the workmen's compensation law and shall not examine, treat, consult or in any other way care for a compensation claimant at the request either of the claimant or of a carrier. S. 986 passed the assembly March 13. It proposes the creation of a temporary state commission to examine into the need for and to make recommendations relative to the creation of a state university. S. 1000 passed the assembly March 19. To amend the law relating to privileged communications, it proposes the waiver of such privilege by any party in interest in any litigation wherein the interests of the personal representative of the deceased patient are deemed by the trial judge to be adverse to those of the estate. S. 1772 passed the senate March 13. To amend the state licensing law, it proposes to postpone from July 1945 to July 1947 the time during which previous licentiates whose licenses lapsed during military service may have a renewal license without examination. This bill is similar to A. 1974. S. 1773 passed the senate March 13. To amend the state licensing law, it proposes that persons lawfully inducted into the military service who were licentiates under the state law at the time of their induction may apply for a renewal of their license within three months of discharge from the service or within three months of discharge from any period of hospitalization in a facility maintained by the United States Veterans Administration. This bill is similar to A. 1973. S. 1797 passed the senate March 14. To amend the workmen's compensation law, it proposes that physician members of the industrial council shall not be eligible for authorization to render medical care under the act and shall not examine, treat, consult or in any other way care for a compensation claimant at the request either of such claimant or of a carrier. This bill is similar to S. 577. S. 2242, to amend the education law, passed the senate March 20. It proposes to provide for the revocation or annulment of a license to practice medicine for splitting fees in x-ray diagnosis or physiotherapeutic or pathoiogic examination or diagnosis, or administering anesthesia, but would permit a physician to contract with nonprofit hospitals for not to exceed a year with financial provisions subject to review by an arbitration committee.

Rhode Island

Bill Introduced.—H. 855, to amend the law relating to health of school children, proposes that the services rendered to school children shall be rendered by duly licensed physicians or dentists.

Bill Passed.—H. 569 passed the house March 14. To amend the law relating to discrimination by any state department against certain professional groups of the healing arts, it proposes to include chiropractors within the group against which no discrimination is allowed.

South Carolina

Bill Passed.—S. 124 passed the house March 12. It proposes the creation of a South Carolina Hospital Commission to make a complete survey of the hospitals, health centers and other related facilities in the state and to file reports and recommendations concerning the same to the next session of the general assembly.

Virginia

Bill Enacted.—H. 289 has become chapter 164 of the Laws of 1946. It requires persons dealing in the handling and processing of food for human consumption to submit each six months a certificate from a physician duly licensed for that purpose by the state board of health, certifying that such person has been examined and found free from any contagious or infectious disease.

West Virginia

Bill Passed.—S. 3-X, passed the house March 22. To amend the law relating to hospital and medical service plan corporations, it proposes a new law for the organization and regulation of hospital service and medical service corporations. Among other features, it proposes the creation of a hospital and medical service advisory council to assist the insurance commissioner in the supervision of such corporations. "Medical service" would be defined as "such medical and surgical care, to be provided by duly licensed physicians, or such payment therefor, as may be specified in the contract made by the subscriber with the corporation."

Council on Medical Service and Public Relations

RADIO TRANSCRIPTIONS NOW READY

"The Public Comes First," a new series of six radio transcriptions prepared by the Council on Medical Service and Public Relations in cooperation with the Bureau of Health Education, is ready for distribution. These transcriptions, in which Harriet Hester, nationally known radio script writer, interviews members of the Council, deal with various phases of the medical care problem, urban and rural health, voluntary prepayment plans and the A. M. A. Constructive Program for Medical Care. These consist of the following fifteen minute transcriptions:

"What Constitutes Adequate Medical Care?" Dr. Roger I. Lee and Dr. Thomas A. McGoldrick.
"What Are Rural Medical Problems?" Dr. James R. McVay and Dr. W. R. Brooksher.
"The Costs of Illness," Dr. Louis H. Bauer.
"Hospital Insurance and How to Make Use of It," Dr. Alfred W. Adson and Mr. John R. Mannix.
"Prepaid Medical Service Plans," Dr. John H. Fitzgibbon and Mr. J. C. Ketchum.
"The Public Comes First," Dr. Herman L. Kretschmer and Dr. E. J. McCormick.

Notices of this service have been sent to various radio stations throughout the country. Proper committees of county medical societies are urged to contact their local radio stations and schedule these broadcasts. Stations are scheduling these on a sustaining (no fee) basis. These platters may be obtained free of charge by writing direct to the Bureau of Health Education or the Council office.

PREPAID MEDICAL CARE NEWS

Voluntary Prepayment Medical Care Plans—1945

The number of voluntary prepayment medical care plans sponsored or approved by medical societies is increasing so rapidly that any report becomes outdated before it is published. The most recent report, that of the Federal Security Agency, lists fifty-three such plans in operation as of June 1945. This is twenty more than was listed in the June 1944 reprint.

Twenty-five states now have one or more voluntary prepayment medical care plans in operation. These are Alabama, California, Colorado, Connecticut, Delaware, Iowa, Kansas, Louisiana, Massachusetts, Michigan, Missouri, Nebraska, New Jersey, New Hampshire, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Texas, Virginia, Washington, West Virginia and Wisconsin.

The plans vary widely in some ways and yet, surprisingly enough, are quite similar in their basic characteristics. They vary widely in the areas covered. There are county plans, city plans, area plans and state plans. They vary considerably in the benefits provided to subscribers. Mostly they provide only in-hospital surgical and obstetric coverage, although benefits for x-ray and anesthesia are frequently included. A small number of plans include all services, medical and surgical, in or out of the hospital. A fairly recent benefit which is increasing in popularity is in-hospital medical care. This benefit does not start until after several days have elapsed and continues at a

per diem rate for a period of from one to two and a half months.

The plans are similar in that all have a free choice of physician and that all are voluntary and with few exceptions include the entire family. The principle of allowing subscribers to continue the contract after leaving the group has been generally accepted. In such instances the premiums are paid at less frequent intervals, i. e. quarterly or semiannually. Waiting periods have become fairly well standardized and include from nine to twelve months for maternity cases and one year for tonsillectomies. A preexisting condition clause is found in some contracts.

The most popular type of plan is a combination service-indemnity plan in which subscribers earning less than a given amount may not be charged an additional fee by the doctors. When the subscribers' earnings are more than the stated income limit, the doctor is free to make an additional charge. There are, however, a number of exceptions to the combination type plan. On the one extreme are the Washington state plans (or bureaus, as they are termed), which offer a complete coverage with no income limits, and on the other extreme are the straight cash indemnity plans, such as Ohio Medical Indemnity, Inc.

The relationship with Blue Cross Hospital Plans has been the subject of much discussion pro and con. The tendency in most areas is to work with Blue Cross, particularly in administration. Thirty-one of the fifty-three plans are coordinated with Blue Cross hospital plans. Eight of these are operated under single boards of trustees, and the hospital service corporation offers both contracts. In other words, there is really no medical plan but rather a hospital plan offering medical coverage.

In the remaining twenty-three plans the medical and hospital groups have separate corporations each controlled by their respective professions. Here the hospital plan participates in or handles entirely the administration, usually on a contract basis.

The year 1945 has given a tremendous impetus to the voluntary prepayment medical care plan movement. Fifteen new plans were started, with practically no two alike in any but the basic characteristics. Other plans are in the making and will be started in 1946.

A year ago a general pattern for plans seemed to have been set. However, the fifteen new plans formed in 1945 have brought forth a number of new ideas with which to experiment, not experiment as to the actuarial soundness of given premiums and benefits but experiment as to underwriting, as to control and as to administration features. The big problem now is to devise a means for determining the success of the various experiments, get cooperation in gathering information from the plans and provide some central unit or authority to correlate the program in general.

Indiana Adopts Medical Insurance Plan

After three years of study and discussion by the Indiana State Medical Association, the house of delegates has authorized the creation of a nonprofit mutual indemnity insurance company.

The company will bear the name "Mutual Medical Insurance, Inc." and will be organized under the Indiana statutes. It is planned to offer a limited medical and a surgical coverage on a group basis.

The plan will be financed by contributions from physicians and other interested groups. The required paid in capital is $65,000; of this sum $25,000 must be deposited with the state department of insurance. The remainder will be available for organizing and operation expenses.

The board of directors consists of the following physicians:

I. C. Barclay, Evansville	Wemple Dodds, Crawfordsville
James H. Crowder, Sullivan	William H. Howard, Hammond
A. P. Hauss, New Albany	C. S. Black, Warren
C. F. Overpeck, Greensburg	A. Jerome Sparks, Fort Wayne
A. M. Mitchell, Terre Haute	Alfred Ellison, South Bend
W. U. Kennedy, New Castle	Walter L. Portteus, Franklin
Cyrus J. Clark, Indianapolis	F. S. Crockett, Lafayette
E. H. Clauser, Muncie	M. R. Lohman, Fort Wayne
J. E. Ferrell, Fortville	F. T. Romberger, Lafayette

Washington Letter

(From a Special Correspondent)

March 25, 1946.

Doctors Named to Veterans Administration Staff

Two assistant administrators and five specialists have been appointed to the Veterans Administration medical staff, Dr. Paul R. Hawley, medical director, announced. Dr. J. C. Harding of Washington will be assistant medical director for auxiliary services, and Dr. M. M. Fowler of Chevy Chase, Md., will be assistant medical director for dental services. Five physicians named as part time chiefs of sections in the professional services division are Brig. Gen. James S. Simmons, who directs the Army's preventive medicine program, tropical medicine; Dr. Albert M. Snell of the Mayo Clinic, gastroenterology; Dr. Charles C. Wolferth, University of Pennsylvania Hospital, cardiology; Dr. Harry L. Alexander, Washington Universtiy School of Medicine, allergy; Dr. James H. Maxwell, University of Michigan Medical School, otolaryngology. The Veterans Administration has ordered an acceleration in hospital construction to relieve a current shortage of beds in veterans' hospitals. The agency has called for 1,500 rehabilitation specialists to aid in a medical program of education and shop training for veterans' hospitals. Dr. Donald A. Covalt, assistant director for medical rehabilitation, hopes to provide training for 5,000 persons in reconditioning and convalescent programs.

Approval of Mental Health Bill Asked by Senator Pepper

Senator Pepper, Democrat of Florida, is pushing for a favorable report by the Senate Education and Labor Committee on legislation to inaugurate a nationwide attack on mental disease problems. He plans to urge larger appropriations than those advocated by the House, $4,500,000 for a Mental Health Institute at Bethesda and $10,000,000 for research work and aid to the state. Senator Pepper favors a $10,000,000 outlay for the center, since Surgeon General Parran revealed that the $4,500,000 estimate was based on prewar costs. Congressman Priest, Democrat of Tennessee, introduced the bill after it was reported that half of all United States hospital beds are occupied by mental patients.

Senator Calls for Five Year Health Program

Senator Murray, Democrat of Montana and chairman of the Senate Education and Labor Committee, advocated a five year health program for America, stating that "the time has come to stake out long-range health goals for America's future." He announced that he had asked the American Medical Association and the American Dental Association and some 180 other organized groups in the health field for opinions of what should be "specific health goals" for the next five years. Senator Murray will open hearings April 2 on proposed legislation for national health insurance, which contemplates prepayment of medical and hospital costs.

Food Shortage Expected to Last Another Year

A Department of Agriculture official reports that the food shortage "will be with us into the 1947 harvest," confirming claims of retiring director general Herbert Lehman of UNRRA. The Agriculture spokesman denied that food officials had taken the stand that food supply problems would end with the beginning of the 1946 harvest. Asked at his press conference about Mr. Lehman's suggestion that the nation return to wartime food rationing, President Truman said he would not object if this should prove necessary, but he hoped that it could be avoided.

Warning by Secretary of State that Draft Must Be Extended

Secretary of State James F. Byrnes told the Senate Military Affairs Committee that the security and welfare of the country will be at stake if the Draft Act, scheduled to expire on May 15, is not renewed. Warnings of dangers in depletion of the armed forces were also given by Army Chief of Staff Eisenhower and War Secretary Patterson.

Amputees Assured That They Will Get Cars

Assurances were given from two quarters that amputees would be provided with automobiles, as requested by a group of them here recently. Congressman Rogers, Republican of Massachusetts, said that she will sponsor legislation to buy cars for amputees if the Veterans Administration refuses to provide them. Miss Dorothy Frooks, New York lawyer, in talking with a six man war amputee car committee at Forest Glen Sanitarium of Walter Reed Hospital, said that Public Law 16 provides that any disabled veteran is entitled to equipment for "employability." Col. Wallace H. Graham, personal physician to President Truman, promised to communicate Miss Frooks's interpretation of the law to the President, who has been concerned over this phase of amputee problems.

Plan to Reduce Fatal Accidents

The Federal Interdepartmental Safety Council submitted to President Truman a plan to extend safety measures to all federal departments and agencies in the hope of cutting down accidents which cost 2,852 lives in five and a half years. The plan was approved at a meeting of 100 agency representatives. It provides for a minimum expenditure of $3 per employee annually to set up safety activities.

Cattle Vaccine to Improve Food Supply

Development of a vaccine to protect cattle against rinderpest, or cattle plague, reported by a United States-Canadian commission, is expected to improve the world food supply. Although the disease does not prevail here, it is virulent in the Orient, and a million doses of the vaccine have been turned over to the United Nations Relief and Rehabilitation Administration to be shipped to China.

Possibility of Preventing Outbreak of Malaria

Dr. Daniel L. Seckinger, assistant medical officer of the District of Columbia, states that, despite the presence in Washington of returned soldiers who carry the malaria parasite, an outbreak of malaria can be avoided by proper precautions. "There may be some cases this summer, but there should be no epidemic," he said.

Retirement of Lehman from UNRRA Because of Ill Health

Herbert T. Lehman, former governor of New York, has had to resign as director of the United Nations Relief and Rehabilitation Administration because of ill health. He has worked hard and untiringly to make a success of the world relief organization.

Truman Names April "Cancer Control Month"

President Truman has proclaimed April "Cancer Control Month." Calling on the American people for a concerted effort to eradicate cancer, he said that cancer took a toll of 170,000 lives last year and that "a large percentage of deaths from cancer can be prevented if the disease is discovered and treated in its early stages."

End of Army Specialized Training Program at Georgetown

Graduation exercises at Georgetown University School of Medicine signalized the formal closing there of the Army Specialized Training Program. Georgetown set up a model system that was adopted by the Army throughout the country.

Praise for Government Research Work

Dr. Cora Dubois of the State Department's Office of Research and Intelligence told the Anthropological Society of Washington that "our government pursues research on a scale and of a quality unsuspected by many of us before we came down here."

Speedy Passage Asked for Washington Slum Clearance Bill

John Ihlder, executive director of the National Capital Housing Authority, has asked for speedy House passage of a $20,000,000 slum clearance bill for the nation's capital.

Zoning Laws May Be Lifted to Aid Doctors

Washington doctors returning from military service who have been unable to find office space may get relief through a proposed amendment to strict District of Columbia zoning regulations to permit doctors and dentists to open offices in residential areas.

Coming Medical Meetings

Aero Medical Association, Chicago, April 7-9. Dr. David S. Brachman, 1016 Dime Building, Detroit 26, Secretary.

Alabama, Medical Association of the State of, Birmingham, April 16-18. Dr. Douglas L. Cannon, 519 Dexter Ave., Montgomery 4, Secretary.

American Association of Anatomists, Cleveland, April 4-6. Dr. Eliot R. Clark, University of Pennsylvania School of Medicine, Philadelphia 4, Secretary.

American College of Physicians, Philadelphia, May 13-17. Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Executive Secretary.

American Pediatric Society, Skytop, Pa., May 1-3. Dr. Hugh McCulloch, 325 N. Euclid Ave., St. Louis 8, Secretary.

American Gastro-Enterological Association, Atlantic City, May 24-25. Dr. J. Arnold Bargen, 102 Second Ave., S. W., Rochester, Minn., Secretary.

American Society for Research in Psychosomatic Problems, New York, May 11-12. Dr. Edwin G. Zabriskie, 714 Madison Ave., New York 21, Secretary.

American Surgical Association, Hot Springs, Va., April 2-4. Dr. Warfield M. Firor, Johns Hopkins Hospital, Baltimore 5, Secretary.

Arizona State Medical Association, Phoenix, May 2-3. Dr. Frank J. Milloy, 112 N. Central Ave., Phoenix, Secretary.

Arkansas Medical Society, Little Rock, April 14-15. Dr. W. R. Brooksher, 602 Garrison Ave., Fort Smith, Secretary.

California Medical Association, Los Angeles, May 7-10. Dr. George H. Kress, 450 Sutter St., San Francisco 8, Secretary.

Central States Dermatological Society, Detroit, April 27. Dr. Clarence E. Reyner, Henry Ford Hospital, Detroit, Secretary.

Connecticut State Medical Society, Hartford, May 1-3. Dr. Creighton Barker, 258 Church St., New Haven 10, Secretary.

Florida Medical Association, Jacksonville, April 22-24. Dr. Robert B. McIver, P. O. Box 1018, Jacksonville, Secretary.

Georgia, Medical Association of, Macon, May 7-10. Dr. Edgar D. Shanks, 478 Peachtree St., N.E., Atlanta, Secretary.

Illinois State Medical Society, Chicago, May 14-16. Dr. Harold M. Camp, 224 S. Main St., Monmouth, Secretary.

Iowa State Medical Society, Des Moines, April 17-19. Dr. John C. Parsons, 406 Sixth Ave., Des Moines 9, Secretary.

Kansas Medical Society, Wichita, April 22-25. Dr. F. R. Croson, 112 W. Sixth St., Topeka, Secretary.

Louisiana State Medical Society, Alexandria, May 6-8. Dr. P. T. Talbot, 1430 Tulane Ave., New Orleans 13, Secretary.

Maryland, Medical and Chirurgical Faculty of, Baltimore, April 23-24. Dr. W. Houston Toulson, 1211 Cathedral St., Baltimore 29, Secretary.

Massachusetts Medical Society, Boston, May 21-23. Dr. Michael A. Tighe, 8 Fenway, Boston, Secretary.

Minnesota State Medical Association, St. Paul, May 20-22. Dr. B. B. Souster, Lowry Medical Arts Bldg., St. Paul 2, Secretary.

Mississippi State Medical Association, Jackson, May 14-15. Dr. T. M. Dye, Box 295, Clarksdale, Secretary.

Nebraska State Medical Association, Lincoln, May 6-9. Dr. R. B. Adams, 416 Federal Securities Bldg., Lincoln 8, Secretary.

New Hampshire Medical Society, Manchester, May 14. Dr. C. R. Metcalf, 5 S. State St., Concord, Secretary.

New Jersey, Medical Society of, Atlantic City, May 21-23. Dr. Alfred Stahl, 55 Lincoln Park, Newark, Secretary.

New Orleans Graduate Medical Assembly, New Orleans, April 1-4. Dr. Joseph S. D'Antoni, 1430 Tulane Ave., New Orleans 13, Secretary.

New York, Medical Society of the State of, New York, April 29-May 3. Dr. Walter P. Anderton, 292 Madison Ave., New York 17, Secretary.

North Carolina, Medical Society of the State of, Pinehurst, May 1-3. Dr. Roscoe D. McMillan, P. O. Box 232, Red Springs, Secretary.

Northern Tri-State Medical Association, South Bend, Ind., April 9. Dr. John L. Stifel, 232 Michigan St., Toledo 2, Secretary.

Ohio State Medical Association, Columbus, May 7-9. Mr. Charles S. Nelson, 79 E. State St., Columbus, Executive Secretary.

Postgraduate Institute of the Philadelphia County Medical Society, Philadelphia, April 9-12. Dr. George P. Muller, 301 S. 21st St., Philadelphia, Director.

Rhode Island Medical Society, Providence, May 15-16. Dr. William P. Buffum, 122 Waterman St., Providence 6, Secretary.

South Carolina Medical Association, Greenville, April 30-May 2. Dr. Julian P. Price, 105 W. Cheves St., Florence, Secretary.

Tennessee State Medical Association, Knoxville, April 9-11. Dr. W. M. Hardy, 706 Church Street, Nashville, Secretary.

Texas, State Medical Association of, Galveston, May 6-9. Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth 3, Secretary.

West Virginia Medical Association, Huntington, May 13-15. Mr. Charles Lively, P. O. Box 1031, Charleston 24, Executive Secretary.

Southwest Allergy Forum, Houston, Texas, April 8-9. Dr. Albert H. Braden, 1704 Crawford St., Houston, Secretary.

Society of American Bacteriologists, Detroit, May 21-24. Dr. Leland W. Parr, 1335 H St., N. W., Washington 5, D. C., Secretary.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

ALABAMA

State Medical Meeting.—The Medical Association of the State of Alabama will hold its 1946 session at the Thomas Jefferson Hotel, Birmingham, April 16-18 under the presidency of Dr. Walter F. Scott, Birmingham, and with the Jefferson County Medical Society acting as host. Among the speakers will be:

Dr. Edgar Burns, New Orleans, Clinical Importance of Congenital Anomalies of the Urinary Tract.
Dr. J. Brown Farrior, New Orleans, A Critical Analysis of the Fenestration Operation.
Major Frederic T. Becker, M. C., Memphis, Tenn., Cutaneous Eruptions Frequently Seen in Eye, Ear, Nose and Throat Practice.
Dr. Lawson Thornton, Atlanta, Ga., Injuries to the Hip.
Col. James B. Brown, M. C., New Orleans, Military Plastic Surgery.
Dr. Champ Lyons, New Orleans, Chronic Shock—Its Diagnosis and Treatment.
Edwin F. Stegen, Chicago, Showdown on Political Medicine.

There will be many Alabama physicians on the program. On Tuesday a special ceremony will be held in the auditorium of Hillman Hospital to present to the Medical College of Alabama portraits of Chauncey Sparks, governor of Alabama, and Dr. William D. Partlow, Tuscaloosa, chairman of the "Four Year Medical School" of the state medical association, in appreciation of their services toward procuring the Medical College of Alabama. On Wednesday Dr. Alton Ochsner, New Orleans, will deliver the Jerome Cochran Lecture on "The Significance of Incidental Observations in the Progress of Medicine."

ARKANSAS

Physician Honored.—Dr. Merrieman L. Norwood, Lockesburg, was given a dinner by the Arkansas Medical Society to honor his many years' service to the profession. Dr. Norwood, who is a senior in the list of living past presidents of the state society, was presented with a watch as a memento of the occasion.

State Medical Meeting.—The seventieth session of the Arkansas Medical Society will be held at the Hotel Marion, Little Rock, April 15-17, under the presidency of Dr. Davis W. Goldstein, Fort Smith, who will speak on "The Physician's Responsibility in Venereal Disease Control." Among the out of state speakers will be:

Dr. Howard R. Mahorner, New Orleans, Surgical Experience with Vascular Diseases of the Lower Extremities.
Dr. Walter C. Alvarez, Rochester, Minn., What is Wrong with the Dyspeptic Whose Findings are all Negative.
Dr. Lee De Cady, St. Louis, The Development of Prepaid Medical Service in the United States.
Dr. Herbert R. Edwards, New York, Trends in Tuberculosis Control Procedures.
Dr. Wiley R. Buffington, New Orleans, Detached Retina.
Mr. George B. Larson, Chicago, Lay Cancer Education and the Physician.
Dr. Roland M. Klemme, St. Louis, Surgical Treatment of Parkinson's Disease.
Dr. Hardy A. Kemp, Detroit, The Michigan State Medical Society's Plan for Providing Practice Arrangements with Beneficiaries of the Veterans Administration.

CALIFORNIA

Carl Schmidt Dies.—Carl L. A. Schmidt, Ph.D., professor of biochemistry and chairman of the division, University of California Medical School, Berkeley, from 1924 to 1944, when he retired, died February 23, aged 60.

Borden Award Given to Student.—Robert O. Scow, Avenal, has been presented the annual Borden undergraduate research award of $500 by unanimous choice of the research committee of the University of California Medical School. The award, financed by the Borden Foundation, is made annually to a graduating senior for research which is deemed most meritorious (THE JOURNAL, Dec. 22, 1945, p. 1218). Dr. Scow led or participated in research which has resulted in the publication of ten scientific papers. The research committee commended Scow for remarkable ingenuity in research.

Applications for Licensure for 1945.—During the year 1945 there were 1,926 applications filed for the various types of certificates issued by the California State Board of Medical Examiners; of this number 1,704 were for physicians and surgeons certificates. The number of applications filed for written examination showed a slight increase over the previous year, while the number of reciprocity applicants who based their applications on a license issued by another state, national board credentials or commissions in the United States Army, Navy or Public Health Service showed an increase of 528, or nearly twice the number filed in 1944. The number of certificates issued in 1945 of all types totaled 1,419; of this number 1,208 were physicians and surgeons certificates, 599 were issued by reciprocity to applicants who based their applications on a license issued by some other state, 98 were issued on national board credentials and 11 were issued on government credentials. On Dec. 31, 1945 there were 641 applications of all classes on file and awaiting final disposition in 1946.

CONNECTICUT

State Medical Meeting.—The Connecticut State Medical Society will hold it 154th meeting in Hartford, May 1-3, under the presidency of Dr. Joseph H. Howard, Bridgeport. Among the speakers will be:

Dr. Perrin H. Long, Baltimore, Medical Progress and Medical Education During the War.
Col. James C. Harding, M. C., Washington, The Place of Civilian Physicians in the Medical Care of Veterans.
Dr. Dean A. Clark, New York, Voluntary Health Insurance Plans.
Dr. James A. Shannon, New York, Malaria.
Dr. Chester S. Keefer, Boston, The Clinical Use of Penicillin and Streptomycin.
Dr. Oliver Cope, Boston, Thyroid Lumps.
Dr. Isidor S. Ravdin, Philadelphia, Protein Deficiencies.
Dr. William Dock, Brooklyn, The Value and Hazards of Complete Bed Rest.
Dr. J. Burns Amberson Jr., New York, Chronic Nontuberculous Pulmonary Disease: Clinical Principles Useful in Diagnosis and Treatment.

Features of the meeting will include a symposium on the hospital as a public service unit with Dr. Louis P. Hastings, Hartford, presiding, and a symposium on diseases of the blood with Dr. Harold M. Marvin, New Haven, presiding and the following speakers:

Dr. William B. Castle, Boston, Physiology of Blood Diseases, with Particular Reference to the Mechanism of Therapy.
Dr. Paul Reznikoff, New York, Practical Aspects of the Treatment of Hematologic Conditions.
Dr. Wyman Richardson, Boston, The Selection, Interpretation and Limitations of Laboratory Procedures in Hematology.

INDIANA

Advisory Health Council.—The Indiana Advisory Health Council, comprising forty-five members appointed by the governor, was created by the 1945 legislature. The council is representative of various organizations throughout the state. At its first meeting in Indianapolis Dr. Harry P. Ross, Richmond, was chosen chairman, Howard H. Sweetman, Indianapolis, vice chairman and Mrs. George D. French, Indianapolis, secretary.

Dr. Damon In Charge of State Laboratories.—Samuel R. Damon, Ph.D., director of the bureau of laboratories of the Alabama State Department of Health, has been appointed head of the laboratories of the Indiana State Board of Health to fill the vacancy created when Dr. Clyde G. Culbertson, Indianapolis, resigned to take a position with Eli Lilly and Company (THE JOURNAL, March 9, p. 657). Dr. Damon received his Ph.D. at Brown University, Providence, R. I. He once was a member of the Rhode Island State Department of Health and also of the Johns Hopkins University School of Hygiene and Public Health, Baltimore.

IOWA

State Medical Meeting.—The ninety-fifth session of the Iowa State Medical Society will be held at the Hotel Fort Des Moines, April 18-19, under the presidency of Dr. Ransom D. Bernard, Clarion. Among the speakers will be:

Dr. William S. Middleton, Madison, Wis., Infectious Hepatitis.
Dr. Henry L. Williams, Rochester, Minn., Diagnosis, Cause and Treatment of Endolymphatic Hydrops (Ménière's Disease).
Dr. Henry H. Searls, San Francisco, War Wounds of the Abdomen.
Dr. William A. O'Brien, Minneapolis, Recent Developments in Hospital Organizations and Medical Practice That May Affect the Future.
Dr. Frank L. Feierabend, Kansas City, Mo., The Doctor's Role in the Postwar World.
Major Gen. Paul R. Hawley, M. C., Veterans Administration Program.

The program will also include a series of section meetings to be addressed, among others, by Drs. Oscar T. Clagett, Rochester, on "Lung Resection in Pulmonary Tuberculosis" and Sumner Cohen, Oak Terrace, Minn., "Tracheobronchial Tuberculosis." Other groups meeting will be the Iowa Pathological Society, the State Society of Iowa Medical Women, Iowa Medical Service and the Woman's Auxiliary of the state medical society. The Iowa Anesthesiological Association will be addressed by Dr. Ralph T. Knight, Minneapolis, on "Economics of Anesthesiology."

MAINE

Personal.—Dr. James W. Loughlin, Newcastle, for many years district health officer for District 111, comprising Kennebec, Knox, Lincoln, Sagadahoc and Waldo counties, has retired.——Dr. Delmer A. Craig has resigned as medical director of the Eastern Maine General Hospital to become associated with Charles F. Neergaard, consultant in hospital planning, organization and management, New York.

MARYLAND

Hospital Survey.—Dr. Walter D. Wise, professor of surgery, University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, has been appointed chairman of a new hospital survey committee named by the committee on medical care of the Maryland State Planning Commission.

Health Officer for Forty-Four Years.—Dr. Isaac N. King, deputy state and health officer of Calvert County, resigned February 1, ending some forty-four years' service with the state department of health. Dr. King had been health officer of Calvert County since 1902 and deputy state health officer since 1924. Dr. King, who is president of the Medical and Chirurgical Faculty of Maryland, has been succeeded by Dr. Hugh W. Ward, Owings, as deputy and health officer of Calvert County. Other changes in the department include the reinstatement of Dr. Edward Davens, Baltimore, as chief of the bureau of child hygiene, state department of health, and the reinstatement of Dr. Theodore R. Shrop as deputy state and health officer of Howard County, according to the *Maryland Health Bulletin*.

MINNESOTA

The Judd Lecture.—The thirteenth E. Starr Judd Lecture will be given by Dr. Samuel C. Harvey, William H. Carmalt professor of surgery at Yale University School of Medicine, New Haven, April 15, in the Medical Science Amphitheater. His subject will be "The Healing of the Wound." The late E. Starr Judd, an alumnus of the Medical School of the University of Minnesota, established this annual lectureship in surgery a few years before his death.

MONTANA

Miscellaneous Activities.—Dr. Eugene Hildebrand Jr., formerly of Chicago, is now pathologist and director of laboratories of the Great Falls Clinic, the *Journal Lancet* reports.——The Montana Physicians' Service has been organized on a nonprofit basis to provide the people of Montana with medical care on a budget basis, with Dr. Maurice A. Shillington, Glendive, as president. The service will work in cooperation with the Montana Blue Cross hospitalization organization. The service was set up with the assistance of Dr. Chester L. Cooley, president of the San Francisco County Medical Society and board secretary of the California Physicians' Service. The new group will cooperate with the California service in the veterans' medical care program.

NEW JERSEY

Fredrick Yonkman Named Research Director.—Dr. Fredrick F. Yonkman, chief pharmacist of Ciba Pharmaceutical Products, Inc., Summit, has been appointed director of research for the organization. Dr. Yonkman was formerly professor of pharmacology and therapeutics at Wayne University College of Medicine, Detroit.

NEW YORK

Nutrition Council Urged.—Creation of an adequately financed state nutrition council to coordinate the work of all state departments in the field of nutrition and encourage research and educate the public on the subject was asked March 1 in a report of the joint legislation committee on nutrition, according to the New York *Times*.

New Health Officer in Rochester.—Dr. Robert S. Westphal, Batavia, has resigned as district health officer to become deputy health officer of Rochester, according to newspaper reports. Dr. Westphal will succeed Dr. Burtis B. Breese, who resigned as city health officer to enter private practice. The new appointment will be effective about April 15.

Allergy Group Formed.—On February 1 a group of sixteen physicians met at the Rochester Academy of Medicine to form what will probably be known as the "Section on Allergy of the Rochester Academy of Medicine." Dr. Stearns S. Bullen was elected chairman of the section and Dr. John M. Parker secretary-treasurer, both of Rochester. At a meeting Henry W. Scherp, Ph.D., Rochester, spoke on "Fundamental Immunological Conceptions in Allergy."

James Wilson Honored.—Dr. James R. Wilson, who left his medical activities in Syracuse to join the Americal Medical Association as Secretary of the Council on Foods and Nutrition, was given a farewell dinner February 15 by the Syracuse Children's Bureau and friends and associates at Syracuse University College of Medicine, where he was associate professor of medicine. In addition to many gifts, Dr. Wilson received a typewriter and a scroll signed, among others, by Dr. Herman G. Weiskotten, dean of the medical school; Dr. Leon E. Sutton, Syracuse, and Dr. John A. Root, Clyde, who is succeeding Dr. Wilson as medical adviser at the Children's Bureau.

"Screening" Examinations for Cerebral Palsy Patients.—On March 11 preliminary "screening" examinations were to begin in Strong Memorial Hospital, Rochester, the first step in the development of a Cerebral Palsy Clinic to be formed by the Strong Memorial Hospital and the Rochester Municipal Hospital (THE JOURNAL, February 2, p. 296). In connection with the project a Cerebral Palsy Association was established by a group of parents. Press reports indicate that the formal clinic has not been organized for treatment but will be started later "in a modest way." Under present plans, successive Monday afternoons will be devoted to preliminary examinations of child sufferers for classification and determination of the severity of the disease. The association, through its secretary, Mrs. Herbert C. Soule Jr., Rochester, is arranging appointments for 5 children each Monday, and these schedules will be used at the hospital. After the preliminary examinations have been made, the clinic will be set up in Municipal Hospital, where the permanent treatment center will be located. The treatment department will accommodate 10 hospitalized patients in addition to the ambulatory cases. Physicians from the pediatric, orthopedic, psychiatric and neurologic divisions of Strong Hospital will participate. Under the clinic setup, it is planned, parents will be given instructions for home treatment to follow the specialized therapy at the clinic. The clinic will be supported in part by the state health department and by such special groups as the Elks who have contributed funds. Space for the clinic will be donated by Municipal Hospital.

New York City

Officers of Spanish Speaking Group.—Dr. Jacob M. Gershberg continues as president of the International and Spanish Speaking Association of Physicians, Dentists and Pharmacists for 1946. Among other officers are Dr. Milton B. Plotz, Brooklyn, executive secretary; Dr. William B. McDonough, general secretary, and Dr. Frederick S. Aron, treasurer.

Forum on the Hippocratic Oath.—Dr. Carl A. L. Binger gave the first of a series of forum lectures sponsored by the division of social philosophy of Cooper Union February 5. His topic was "The Doctor's Job." The forum, under the general title of "The Hippocratic Oath," is being given on Tuesday evenings through April 23. Other speakers include:

Dr. Louis H. Schwartz, February 26, The Eye as an Index of Health.
Dr. Ernst P. Boas, March 5, Middle Age: The Test of Modern Medicine.
Dr. Walter Modell, March 12, The New Drugs.
Dr. Norman H. Jolliffe, March 26, Nutrition Comes to the Aid of Medicine.
Dr. Thomas A. C. Rennie, April 2, Mental Illness.
Dr. Stewart Wolf Jr., April 9, Psychosomatic Medicine.
Dr. Leopold Brahdy, April 16, Industrial Medicine.
April 23, not announced.

Regents Rule on Medical and Dental Schools Merger.—The state board of regents ruled February 15 that the merger of the medical and dental schools of Columbia University was "a matter of internal concern for the university itself," in which the board had interest only if courses should fall below prescribed standards, according to the New York *Times*. The case was closed on the recommendation of the board's committee on administration, which conferred with officers of the state dental society, who had requested an investigation of circumstances surrounding the merger of the College of Dental and Oral Surgery and the College of Physicians and Surgeons. In submitting its request the society had cited the fact that the Columbia Dental School had been removed by the New Jersey Board of Registration and Examination from its list of approved schools. The merger of the two schools was reported in THE JOURNAL, March 10, 1945, page 606.

Eye and Ear Infirmary Joins Proposed Medical Center.—The New York Eye and Ear Infirmary, said to be the oldest hospital of its kind in North America, voted February 27 to join the New York University-Bellevue Medical Center plan for the Bellevue area (THE JOURNAL, Dec. 29, 1945, p. 1277). The infirmary will retain its identity under the new arrangement but will occupy a section of the new University Hospital when completed. The infirmary is now housed in a half century old brownstone building at Second Avenue and Thirteenth Street.

The New York Eye and Ear Infirmary was founded in 1820 and is the third oldest hospital of any kind in the city. The founders, Edward Dilafield and John Kearny Rodgers, were inspired by the work of the Royal London Ophthalmic Hospital while studying abroad. On their return they organized the infirmary "to contribute toward the relief of the poor who by a diseased state of one of the most important organs in the human body are deprived of the means of gaining a livelihood."

Grant for Tropical Disease.—The Marcelle Fleischmann Foundation has made a grant of $20,000 a year for a ten year period to the department of public health and preventive medicine of Cornell University Medical College for the study of tropical disease. The specified purpose of the gift is to promote the study of immunologic and allergic manifestations of exotic diseases and to provide for a better understanding of their prevention and treatment. The investigations at Cornell will be under the direction of Morton C. Kahn, Sc.D., associate professor of public health and preventive medicine at Cornell. The Marcelle Fleischmann Foundation is a philanthropy that has been founded recently by Mr. E. M. Fleischmann, Baltimore, in memory of his late wife. This gift was announced in a convocation in the auditorium of Cornell, February 8. A portrait of Marcelle Fleischmann was unveiled at these exercises, and the researches to be conducted under the grant were dedicated to her memory. Mr. Fleischmann made an address in which he presented the grant and indicated the purposes for which it is given.

NORTH CAROLINA

New Industrial Head.—Dr. Otto J. Swisher Jr. has been appointed director of the division of industrial hygiene of the North Carolina State Department of Health, succeeding Dr. Charles B. Davis Jr., Wilmington, resigned. Dr. Swisher, prior to his entry in military service, from which he was recently released, served as director of the division of industrial hygiene of the West Virginia State Board of Health and as health officer of Covington, Tenn.

W. T. Sanger Named Head of Hospital Survey.—William T. Sanger, LL.D., Richmond, Va., president of the Medical College of Virginia, was recently elected president of a special national committee chosen by the North Carolina Medical Care Commission to make a survey of hospital facilities to determine the best location for the proposed expanded medical school and hospital of the University of North Carolina. Other members of the committee include:

Graham Davis, Battle Creek, Mich., hospital director of the Kellogg Foundation.

Dr. John A. Ferrell, New York, medical director of the John and Mary Markle Foundation.

Dr. Hugh R. Leavell, New York, assistant director for medical sciences, Rockefeller Foundation.

Dr. Samuel Proger, Boston, Joseph H. Pratt Diagnostic Hospital.

Dr. Eugene L. Bishop, Chattanooga, Tenn., director of health for the Tennessee Valley Authority.

Dr. Victor Johnson, Chicago, Secretary, Council on Medical Education and Hospitals of the American Medical Association.

OHIO

Strauss Memorial Fund.—Announcement has been made of the creation at Mount Sinai Hospital, Cleveland, of a fund in memory of Dr. Abraham Strauss, late chief of staff in surgery. The fund will be used to provide fellowships for advanced surgical training, a cause which was close to the heart of Dr. Strauss.

Medical Officers of World War II.—The Association of Medical Officers of World War II, incorporated by physicians of Toledo, now has eighty-eight members, all of whom are affiliated with the Academy of Medicine of Toledo and Lucas County. Officers include Dr. Aaron D. Vogelsang, president; Dr. Edouard E. Lyon, vice president; Dr. Richard Hotz, secretary, and Dr. Hazen L. Hauman, treasurer, all of Toledo. It is hoped to make the membership national.

Community Health Festivals.—The Cleveland Health Council, the Anti-Tuberculosis League and the Goodrich Social Settlement House sponsored the second in a series of community health festivals, February 26-28. Twenty organizations displayed health exhibits at a health fair in addition to miscellaneous entertainment. Afternoon sessions were devoted to health in the home, health in the schools and health in the community. Speakers in the evening included Dr. Henry C. Schumacher, Cleveland, Healthy Minds; Dr. Joseph B. Stocklen, Cleveland, How to Keep Well, and Dr. Charles F. McKhann, Cleveland, Health in Growing Children.

War Story Contest.—Members of the Academy of Medicine of Cleveland who served in any branch of the armed services during World War II are invited to submit compositions for a literary contest. Material may relate any experience or event of the author's service. The prizes which are offered by the Bulletin of the academy include a first prize of $50, second prize $15, third prize $10 and honorable mention comprising five prizes of $5. Manuscripts must be in English, typewritten, double spaced and ranging from 750 to 1,000 words. All entries must be submitted to the editor of the Bulletin by May 15. The editorial staff of the Bulletin will be the judges.

PENNSYLVANIA

Charles Crampton Named Deputy Secretary of Health.—Dr. Charles H. Crampton, Harrisburg, has been appointed by Gov. Edward Martin as deputy secretary of health. His appointment brings to three the number of deputy secretaries, the others being Carl C. Tinstman, administrative deputy, and Dr. J. M. Campbell, Harrisburg, medical deputy.

Allen Cowley Wins Seibert Award.—Dr. Allen W. Cowley, Harrisburg, was recently presented with the Seibert Memorial Award, given biennially by the Harrisburg Academy of Medicine. The $500 award is a memorial to the late Dr. William Henry Seibert, who served as the first president of the academy and is made to a physician under 45 who has "preeminently distinguished himself in his profession and whose life as a citizen and scholar has been broad, unselfish and exemplary."

Personal.—Dr. Irene F. Laub, Easton, was elected president of the Northampton County Medical Society recently, the first woman to hold this position in the society.——Dr. Harold K. Hogg, Lancaster, has been named executive secretary of the Lancaster Board of Health, succeeding Dr. Joseph Appleyard, resigned.——Dr. Charles H. Witmer, Lancaster, a member of the St. Joseph's Hospital staff since 1912, has been appointed medical director of the hospital to succeed Dr. John L. Atlee, Lancaster, who resigned after eight years in the position.

Ophthalmologic Meeting.—The Pennsylvania Academy of Ophthalmology and Otolaryngology will hold its annual meeting at the Merion Golf Club, outside of Philadelphia, April 24-25. Among the speakers will be:

Dr. James N. Greear Jr., Washington, D. C., Some Interesting Phases of War Ophthalmology.
Dr. Chevalier L. Jackson, Philadelphia, Pan American Otolaryngology.
Dr. Walter S. Atkinson, Watertown, N. Y., Anesthesia in Ophthalmology.
Dr. Walter I. Lillie, Philadelphia, Retinal Arteriolar Sclerosis.
Dr. Robin C. Buerki, Philadelphia, Contemporary Medical Problems.
Capt. Fred Harbert, Philadelphia, Symposium on the Hard of Hearing.

Philadelphia

Health Institute.—The Woman's Auxiliary of the Philadelphia County Medical Society will hold its sixteenth health institute in the auditorium of the society on April 9. The theme of the meeting will be "Health in the Postwar Era." Among the speakers will be:

Dr. Lewis C. Scheffey, president of the county society.
Dr. Margaret D. Craighill, Experiences in World War II.
Dr. Oliver Spurgeon English, The Role of Psychiatry in a Permanent Peace.
Dr. William Harvey Perkins, The Future of Public Health.
Dr. Edward L. Bortz, The Atomic Bomb.
Dr. George Morris Piersol, The Future of Physical Medicine.
Dr. William G. Leaman Jr., Rheumatic Fever.

TEXAS

Allergy Forum.—The Southwest Allergy Forum will be held at the Rice Hotel, Houston, April 7-9. Among the speakers will be:

Dr. Paul D. Fleming, Houston, The Life Cycle of the Allergic Individual.
Dr. Frank R. Rugeley, Wharton, Allergic Causes of Pruritus Ani.
Dr. Theron G. Randolph, Chicago, Practical Aspects of Food Allergy.
Dr. Philip M. McNeill, Oklahoma City, Classification of Headaches, with Particular Reference to Management.
Dr. Paul T. Petit, Beaumont, Use of Sulfonamide Drugs in Prevention and Treatment of Infective Episodes in Bronchial Asthma.
Dr. Jesse B. Shelmire, Dallas, Contact Dermatitis.
Dr. Bayard T. Horton, Rochester, Minn., Histamine and Antihistamine Agents: Their Use in Clinical Medicine.
Dr. H. Whitney Boggs, Shreveport, La., Conditions Producing Dyspnea Which Have Been Diagnosed as Asthma.

In addition there will be round table discussions, and the guest speaker at the dinner will be Chauncey D. Leake, Ph.D., Dallas, on "The Pharmacology of Drugs Used in the Treatment of Allergy."

WISCONSIN

Gundersen Foundation to Award Scholarship.—The La Crosse Board of Education accepted the $300 annual scholarship award established by the Dr. Adolph Gundersen Memorial Foundation. The foundation was organized on Dec. 20, 1944 to enable members of the medical profession to further research and study. It was named in honor of the late Dr. Adolph Gundersen. The $300 scholarship is to be awarded annually in

June to the student graduating that year from a La Crosse high school who shall be judged by a committee representing teachers of science from the city high schools to be the leading student in sciences and the one most likely to make a contribution after college or university training in that field. Selection will be based on scholastic record in biology, chemistry and physics, standing in a science aptitude test and general ability in all subjects. Officers of the foundation are Dr. Sigurd Gundersen, president; Dr. Gunnar Gundersen, vice president; M. P. Jonsrud, secretary-treasurer, and Fred E. Steel and Dr. Alf H. Gundersen, directors.

ALASKA

Territorial Election.—Dr. Paul B. Haggland, Fairbanks, has been named president-elect of the Alaska Territorial Medical Association and Dr. Arthur N. Wilson, Ketchikan, installed as president. Other officers are Dr. Dwight L. Cramer, Ketchikan, vice president, and Dr. William P. Blanton, Juneau, secretary-treasurer.

HAWAII

Clarence Carpenter Dies.—Clarence W. Carpenter, M.S., pathologist for the Hawaiian Sugar Planters' Association Experimental Station, Honolulu, died in Honolulu February 21, aged 58.

Territorial Journal Includes Nurses' Activities.—The *Hawaii Medical Journal*, the official publication of the Hawaii Territorial Medical Association, with the January-February issue became the official publication also of the Hawaii Territorial Nurses Association.

Personal.—Bernard Witlin, acting director of the bacteriologic laboratories of the Hawaii Board of Health, has resigned to accept a position with the Ohio State Health Department, Columbus, it is reported. Dr. Pauline G. Stitt, Buffalo, assistant director of the bureau of maternal and child health and crippled children, has resigned to become a regional medical consultant of the U. S. Children's Bureau for the southeastern section of the United States.——The title of Dr. Richard K. C. Lee, Honolulu, director of public health in the Territory, has been changed to assistant health executive in order to conform to the mainland practices, the Honolulu *Advertiser* reported recently.

Physicians Honored.—On December 7 Honolulu County Medical Society held a special meeting to honor sixty-five physicians from Hawaii who have been engaged in military service during the war. Seventeen of the group were present at the meeting. Each one was presented with a certificate from the society with the names of all the men surrounding a figure which symbolized the history of medicine in Hawaii. Floral leis symbolizing the "kindly aloha felt by all the civilian members toward their service brothers" were presented to the doctors who were honored on their return and to the following physicians who presented the program:

Comdr. Stanley J. G. Nowak (MC), Surgery of the Sympathetic Nervous System: Indications.
Lieut. Comdr. Samuel H. Gray (MC), Recurrent Acute Pancreatitis: Clinical Considerations.
Lieut. Comdr. Charles W. Peabody (MC), Internal Derangements of the Knee Joint: Types and Treatment.
Lieut. Comdr. Clayton B. Ethridge (MC), Acute Pericarditis Simulating Coronary Thrombosis: Differential Considerations.

GENERAL

Medical Golfing Association.—The American Medical Golfing Association will hold its thirtieth annual tournament at San Francisco Golf and Country Club, San Francisco, July 1. Dr. James W. Morgan, 384 Post Street, San Francisco, is chairman of arrangements for the San Francisco tournament. Applications for fellowship in the American Medical Golfing Association may be obtained by writing the secretary, Mr. William J. Burns, 2020 Olds Tower, Lansing 8, Mich.

Dr. Weaver Joins Infantile Paralysis Foundation.—Harry M. Weaver, Ph.D., senior administrative assistant and assistant professor of anatomy, Wayne University College of Medicine, Detroit, has been named assistant to the medical director of the National Foundation for Infantile Paralysis. Dr. Weaver's work will be with the foundation's research program and fellowship training program for physicians and research workers. Dr. Weaver received his Ph.D. at Ohio State University. He has been a member of the faculty of the Wayne University since 1938.

International Health Conference.—The Economic and Social Council of the United Nations Organization decided on February 15 to hold an international health conference in Paris beginning June 20, the New York *Times* reported. A special preparatory committee was going to Paris in a short time to prepare the agenda. The conference will consider the establishment of machinery for international action in the field of public health. The Soviet delegate in the council urged delaying the conference until 1947, but the United States, Britain and China declared that the question of world health constituted an urgent problem.

Narcotic Violations.—The U. S. Bureau of Narcotics, Treasury Department, Washington, D. C., has announced the following:

Dr. Joseph Herman Freedman alias Joseph H. Freeman, Hamilton and Cincinnati, Ohio, following his pleas of guilty to false execution of narcotic prescriptions, was on Oct. 22, 1945 sentenced to a term of two years, which was suspended and he was placed on probation for two years. This sentence is to commence at the expiration of a sentence of a term of one year and one day, also given on October 22, for violation of the federal narcotic law.

Dr. Frederick C. Steuart, Manchester, N. H., following his plea of guilty to violation of the federal narcotic law was on September 12 sentenced to a term of one year and one day, which was suspended and he was placed on probation for a period of two years.

Dr. Frank Richard Stephenson, Alto, Ga., pleaded guilty to violation of the federal narcotic law October 22 and was sentenced to serve a term of one year and one day.

Dr. Edmund C. Snavely, Sedalia, Mo., pleaded guilty October 15 to violation of the federal narcotic law and was sentenced to a term of one year and one day; placed on probation for five years to begin at the expiration of prison sentence. On November 15 the original sentence was modified; received a fine of $1,500 and placed on probation for five years.

Dr. Lee A. Butler, Lafayette, La., pleaded guilty January 9 to a narcotic violation; sentence suspended and placed on probation for five years; fined $5,000.

Dr. King David Cammack, Chicago, pleaded guilty to narcotic violation; on November 7 sentenced to term of two years, which was suspended; placed on probation for two years.

Dr. Roy Herndon Cox, Chicago, pleaded nolo contendere to narcotic violation; on January 17 placed on one year's probation.

Dr. Simon Bloom, New York, following his conviction of narcotic violation was on Dec. 14, 1945 sentenced to a term of one year and one day.

Dr. Ralph B. Brown, Columbus, Ohio, pleaded guilty to narcotic violation; on January 14 sentenced to a term of five years; sentence suspended; placed on probation for five years.

Dr. Joseph E. Fudell, Brooklyn, pleaded guilty to narcotic violation; on November 26 sentenced to a term of three years' probation.

Dr. Wyman W. Hayden, Columbia, S. C., pleaded nolo contendere to narcotic violation; on November 26 sentenced to a term of two years and fined $500; sentence was suspended and he was placed on probation for a period of five years.

Dr. Ellis G. Klingler, Chicago Heights, Ill., pleaded nolo contendere to narcotic violation; found guilty November 5 and sentenced to a term of two years; sentence suspended and he was placed on probation for two years.

Dr. Berrien W. Kendall, Columbia, S. C., pleaded guilty to narcotic violation; on November 6 sentenced to a term of five years' probation.

Dr. William S. Knox, Waynesburg, Pa., pleaded guilty on Sept. 26, 1945 for narcotic violation and sentenced to a term of two years.

Dr. Roy T. Haskell, Akron, Ohio, pleaded guilty to narcotic violation and on December 11 was sentenced to pay a fine of $500.

Dr. Harrison B. Jewell, Perry, Iowa, and Dr. John H. Jewell, Coon Rapids, Iowa, pleaded guilty to narcotic violation; on Nov. 13, 1945 sentence postponed and each defendant was placed on probation for a period of three years.

Dr. David Newman, Bronx, New York, pleaded guilty to narcotic violation and on October 22 was sentenced to a term of two years' probation.

Dr. Robert E. Rahm, San Antonio and Falls City, pleaded guilty to narcotic violation on January 24; sentence suspended and placed on probation for five years on condition that he surrender his special tax stamp and refrain from applying for registration under the federal narcotic law during period of probation.

Dr. Walter C. Rohrkaste, Pittsburgh, pleaded guilty to narcotic violation and on Dec. 4, 1945 sentence was suspended and he was placed on probation for five years.

Dr. Charles Hudson Turner, Dallas, on November 5 was sentenced to serve a term of eighteen months; court also recommended that he be incarcerated in U. S. Public Health Service Hospital, Lexington, Ky.

Dr. Carl W. Wagar, Kalamazoo, Mich., pleaded nolo contendere on November 9 to narcotic violation; on November 15 was sentenced to a term of two years and placed on probation for three years, probation to commence at expiration of penitentiary sentence.

Dr. James Andrew Wren, Lockwood, Mo., pleaded guilty Oct. 1, 1945 to narcotic violation; on same date sentence was suspended and he was placed on probation for two years.

Dr. Ashley Barrington Weathersbee, Cross Hill, S. C., pleaded guilty to narcotic violation; on October 12 was sentenced to a term of fifteen months.

Contact Lens Conference.—The second Contact Lens Conference will be held at the Knickerbocker Hotel, Chicago, May 2-3. On the first day members will hear reports from the organizing committee of the Society for the Advancement of Contact Lens Research and there will be election of officers and a board of directors of the organization. The second day will be devoted to the presentation of scientific papers and case histories. Each paper will not exceed fifteen minutes' reading time. It is urgently requested that all papers planned to be submitted at this meeting be forwarded to the chairman of the organizing committee, Mr. Philip L. Salvatori, 49 East 51st

Street, New York, on or before April 1. In order that adequate reservations may be provided, it is requested that all those who desire to attend this conference communicate promptly with the temporary chairman, Mr. Salvatori. A refresher course on the latest technics in fitting contact lenses will be given, free of charge, to all Obrig contact lens users and students and graduates from the Obrig School for Contact Lens Technicians. This refresher course will be held on the day following the two day meeting of the Society for the Advancement of Contact Lens Research. The society was organized at a meeting in New York Nov. 18, 1944 (THE JOURNAL, Dec. 16, 1944, p. 1041).

Association of Electroencephalographers Formed.—On March 1 the Eastern Association of Electroencephalographers was formed at a meeting in the Graduate Club of the Institute of Living, Hartford, Conn., to promote research in the field and plan to pool scientific information concerning the neurophysiology and clinical application of electroencephalography. Lieut. Comdr. Robert S. Schwab (MC) of the United States Naval Hospital, Boston, was elected chairman of the association, and Dr. Charles W. Stephenson, Hartford, was elected recorder. One of the immediate projects of the group is to approach the American Physiological Society, the American Neurological Society, the American Psychiatric Association and the Council on Physical Medicine of the American Medical Association on the matter of establishing a joint committee among the several organizations for the purpose of considering the desirability and means of establishing minimum standards for approved electroencephalographic laboratories. Chairman of the committee appointed to pursue this project is Dr. Hallowell Davis, associate professor of physiology at Harvard Medical School, Boston; members are Dr. Paul F. A. Hoeter, assistant professor of neurology at Columbia University College of Physicians and Surgeons, New York, and Dr. Margaret A. Kennard, assistant professor of neuropsychiatry and neuroanatomy at New York University College of Medicine. Wladimir T. Liberson, director of the physiologic research laboratory at the Institute of Living and professor at the Ecole des Hautes Etudes in New York City, was appointed chairman, and Leslie F. Nims, Ph.D., assistant professor of physiology, Yale University School of Medicine, New Haven, and Margaret B. Rheinberger, Ph.D., who is in charge of the electroencephalographic laboratory at Montefiore Hospital for Chronic Diseases in New York, were appointed members of the organization and program committee. The newly formed association will meet bimonthly. The next meeting will be on April 12 at the Institute of Living, at which time a draft of the constitution and by-laws will be presented.

PUERTO RICO

New Rural Dispensaries.—Under the auspicies of the Puerto Rican emergency program, construction of seventeen new medical centers in the rural areas of the island has already been started. It is the purpose of this government agency to coordinate the services of these rural dispensaries with the service of the municipal hospitals in the construction program. The insular government contemplates the construction of about 128 rural units, costing about $1,056,000. An investment of about $256,000 will be made in this construction program up to June 30, from which the cost of construction of the seventeen new medical centers in the rural zone will be covered. It is also expected that the insular legislature in its regular February session will pass appropriations amounting to $230,000, which is the additional money needed for the rest of the 1946 program. Of the remainder, $300,000 has been recommended by the planning board to be allocated during the fiscal year 1947-1948, and $270,000 during 1948-1949.

Hospital Construction Program Approved.—The planning board of Puerto Rico has approved a program for the construction of municipal hospitals in the island, where twenty-two municipalities, with a population of about 319,766, are lacking hospital facilities for indigent patients, and less than one half of such a great number of people have the services of a resident physician. The program calls for the investment of about $1,064,000 during the next three years if materials and equipment can be obtained. One bed for each thousand inhabitants is contemplated. At present the Department of Health of Puerto Rico has an allocation of $400,000 voted by the insular legislature for the construction of the first fifteen units, and $50,000 for preparation of plans, specifications and the purchase of land. According to the proposed plan, preference will be given to the construction of municipal hospitals in communities that now lack the service. Distribution of such facilities is to be made on the basis of the 1940 census of the island. The insular legislature is expected to vote the rest of the needed allocation of funds this month. A survey of hospital facilities in Puerto Rico made under the auspices of the health department last year indicates that of the seventy-seven municipalities on the island only fifty-five have hospital facilities, either through government units, district hospitals or private clinics. Of these fifty-five municipalities only thirty-four have a bed capacity of one or more per thousand inhabitants.

FOREIGN

Medical Libraries Aided.—Rehabilitation of medical libraries in the liberated countries of Europe is to be undertaken by the British Royal Medical Society, which will establish a central library bureau with the grant of almost £62,000 from the Rockefeller Foundation. The fund is to cover maintenance for four years.

Chinese Medical Journal Returns to China.—The *Chinese Medical Journal*, which during the war issued its editions in Washington, D. C., has resumed publication from Shanghai. Szeming Sze, editor, gives the address as the Chinese Medical Journal, Chinese Medical Association, 41 Tszepang Road, Shanghai, China.

Congress of French Speaking Electrocardiologic Physicians.—Under the presidency of Dr. Louis Delherm, Paris, the fourth Congress of French Speaking Electrocardiologic Physicians will be held in Paris on the same date as the Congress of Surgery, October 9-12. Three subjects will be discussed: Dr. Albert Lachapele, Bordeaux, on critical study of chronic vertebral rheumatism, Mm. Paul Cottenot, Lamarque and E. Gros on roentgen therapy by contact, and Professors Roger Baudoin and H. Fischgold on possibilities and limitations of electroencephalography. Address all correspondence to Dr. E. Cherigie, 9 Rue Daru.

Personal.—Sir William Ogilvie, London, has been appointed editor of the *Practitioner*, to succeed Dr. Alan A. Moncrieff, London, who has resigned on his appointment to the Nuffield professorship of child health at the University of London. Sir William, who received his knighthood in the New Year Honors list for distinguished services during the war, is surgeon to Guy's Hospital, a vice president of the Royal College of Surgeons and honorary major general and consultant surgeon to the British army. Dr. Moncrieff has been senior editor of the *Practitioner* since 1943, when he succeeded the late Sir Humphry Rolleston. Dr. William A. R. Thomson, London, who joined the *Practitioner* in 1944, will continue as associate editor.

Health in Czechoslovakia.—As a result of six years of German occupation, Czechoslovakia's national health is the gravest of its complicated postwar problems of recovery. With no complete postwar statistics on hand, social insurance data alone indicate an alarming increase of tuberculosis (200 per cent increase for men, 100 per cent for women). Both the people and their government are fully aware of the situation, which is aggravated by the loss of about 5,000 physicians during the occupation. At the faculty of medicine of Charles University in Prague the registration of medical students is four times its prewar size. Additional branches of the Prague faculty have been established in Plzen and Hradec Kralove. Overcrowding, combined with lack of equipment and literature, also hamper the medical faculties of Brno and Bratislava. Notes which students take of professors' lectures in overfilled classrooms are their only textbooks. Yet their professors have no source material on the tremendous progress in research and the practical achievements of American medical science in the past six years. In print and public meetings voices are being raised all over the country asking for these important tools, chiefly American medical journals. Urgent appeals are arriving from deans of medical schools and heads of large hospitals, each of which asks anew, in pathetic need and bewilderment, why no help is reaching them. Some medical books and journals donated to Prague have recently been shipped by the Masaryk Institute in New York, a depository for national and Charles University Library. These generous donations of institutions and private physicians will provide only a trickle of single copies which are to be divided among numerous medical institutions. Physicians who wish to contribute periodicals need only to ship these periodicals in cartons, collect, to Masaryk Institute, 8 West 40th Street, New York 18, where they are catalogued and packed for overseas shipping. Each volume carries an ex libris with the name of the donor and thus provides a permanent record of the individual's contribution to the rebirth of Czechoslovakian science.

CORRECTION

Chief of Surgical Service.—In a recent item under Army Awards and Commendations, Lieut. Col. Oscar E. Nadeau's position was incorrectly given and should have read "chief of surgical service, Fletcher General Hospital."

Deaths

Harold Eugene Robertson ✦ Rochester, Minn.; University of Pennsylvania Department of Medicine, Philadelphia, 1905; born in Waseca, Minn., Oct. 8, 1878; professor of pathology at the University of Minnesota Graduate School, Minneapolis; formerly instructor in pathology at the Albany (N. Y.) Medical College and the Harvard Medical School in Boston, where he was assistant pathologist of the Boston City Hospital; served as instructor in pathology and bacteriology, assistant professor, associate professor and professor of pathology at the University of Minnesota Medical School, Minneapolis, where he was director of the department of pathology, bacteriology and public health from 1917 to 1921; member and past president of the American Association of Pathologists and Bacteriologists and the International Association of Medical Museums; member of the Minnesota Academy of Medicine, Alumni Association of the Mayo Foundation and the American Society of Clinical Pathologists; member of the American Society for the Control of Cancer and its board of directors; fellow of the American College of Physicians; served as a major with the American Expeditionary Forces during World War I; colonel, medical reserve corps, U. S. Army, not on active duty; senior consultant and formerly head of the section on pathologic anatomy, Mayo Clinic; died in the Kahler Hospital March 8, aged 67, of bronchopneumonia and carcinoma of the stomach.

Leon Mitchell Wilbor, Cathedral City, Calif.; University of Buffalo School of Medicine, 1911; born in Le Roy, N. Y., July 29, 1888; member of the American Medical Association and International Hospital Association; fellow of the American College of Hospital Administrators; past president of the Association of Western Hospitals; served during World War I; formerly associated with the U. S. Public Health Service Reserve; served as assistant chief, neuropsychiatric division, medical service, War Risk Insurance, Washington, D. C., when it was taken over by the U. S. Veterans Bureau; formerly medical officer in charge of U. S. Marine Hospital number 5 and U. S. Public Health Service Hospital number 73 both in Chicago, U. S. Veterans Hospital number 74 in Gulfport, Miss., and U. S. Veterans Hospital number 94 in American Lake, Wash.; formerly assistant medical director of the U. S. Veterans Bureau in Washington, D. C.; superintendent of the San Francisco Hospital from Feb. 1, 1928 to Nov. 15, 1943, when he retired; at one time member of the American Psychiatric Institute; died December 5, aged 57, of coronary occlusion.

Burton Thorne Simpson, Buffalo; University of Buffalo School of Medicine, 1903; born in Belleville, N. Y., July 30, 1873; joined the State Institute for the study of Malignant Diseases as resident pathologist in 1910, serving in that capacity until 1924, when he became director, and retiring in 1943 after having reached the compulsory retirement age; formerly associate professor of hygiene and public health at his alma mater; member of the American Medical Association and the American Radium Society; at various times president, vice president, member of the council and board of directors of the American Association for Cancer Research, president and member of the board of directors of the American Cancer Society and member of the scientific advisory board of the International Cancer Research Foundation; served as director of the cancer research division of the state health department and fellow of the Royal Cancer Society of London; died March 5, aged 72, of cardiac dilatation and chronic interstitial nephritis.

Henry Norton Torrey ✦ Detroit; Johns Hopkins University School of Medicine, Baltimore, 1906; born in Creston, Ia., Oct. 7, 1880; fellow of the American College of Surgeons; served with the Harper unit overseas during World War I; past president of the Michigan Association of Industrial Surgeons; civilian aide to the Secretary of War in the Detroit district during World War II; for many years surgical director of the Michigan Mutual Liability Company; consulting surgeon, Harper Hospital; affiliated with the Michigan Mutual Hospital; member of the board of trustees of the Charles Godwin Jennings Hospital, where he died December 28, aged 65, of cerebral hemorrhage.

Charles Jacob Larkey ✦ Bayonne, N. J.; University and Bellevue Hospital Medical College, New York, 1904; specialist certified by the American Board of Radiology; member of the Radiological Society of North America and the American College of Radiology; served as deputy health officer, chief medical inspector to the city board of education and health officer; member of the board of directors and staff of the Bayonne Hospital for many years; taught radiology at Columbia University College of Physicians and Surgeons, New York; on the staff of St. Mary's Hospital, Hoboken; died February 18, aged 62, of carcinoma of the stomach.

Siegfried Wachsmann, Middletown, N. Y.; Friedrich-Wilhelms-Universität Medizinische Fakultät, Berlin, Prussia, Germany, 1891; born in Gleiwitz, Germany, Dec. 24, 1864; member of the American Medical Association; fellow of the New York Academy of Medicine; formerly professor of clinical medicine at the Columbia University College of Physicians and Surgeons and the Fordham University School of Medicine, both in New York; served on the staffs and as medical director of the Montefiore and Sydenham hospitals of New York; died February 18, aged 81, of arteriosclerosis.

Julian Adair ✦ Wilmington, Del.; Hahnemann Medical College and Hospital of Philadelphia, 1902; past president and secretary of the Homeopathic Board of Medical Examiners; served on the city board of health; president of the staff of the Memorial Hospital, where he died November 2, aged 65, of carcinoma of the prostate.

Frank A. Baker, Fall River, Mass. (licensed in Massachusetts under the Act of 1894); died November 18 of generalized arteriosclerosis.

Fredrick Brown, Valley City, N. D.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1905; member of the American Medical Association; chief of staff, Mercy Hospital; died November 13, aged 65, of coronary occlusion.

Harvey Simpler Brown, Freehold, N. J.; College of Physicians and Surgeons, Baltimore, 1899; member of the American Medical Association; served during World War I; for many years a member of the board of health, medical inspector and registrar of vital statistics; past president of the New Jersey State Health Officers Association; died in the U. S. Naval Hospital, Philadelphia, December 17, aged 70.

J. E. Christian, Duluth, Ga.; Atlanta Medical College, 1893; died November 11, aged 78.

Floyd Ferdinand Clark, Duluth, Minn.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1908; member of the American Medical Association; at one time deputy coroner of St. Louis County; on the staff of St. Mary's Hospital, where he died November 15, aged 69, of coronary occlusion.

James Harvey Clark ✦ Carmel, Calif.; Johns Hopkins University School of Medicine, Baltimore, 1936; died recently in Austria, where he was serving for the United Nations Relief and Rehabilitation Administration, aged 47, of heart disease.

Henry Tyler Coleman, Pattonville, Mo.; Washington University School of Medicine, St. Louis, 1895; member of the American Medical Association; died December 19, aged 71, of coronary occlusion.

Francis Aloysius Cregg, Lawrence, Mass.; Jefferson Medical College of Philadelphia, 1905; member of the American Medical Association; died November 29, aged 64, of coronary occlusion.

Adolphus Hamilton Creps, Lima, Ohio; Medical College of Ohio, Cincinnati, 1890; died November 28, aged 78, of bronchopneumonia.

Richard Francis Daly, Marshfield, Mass.; Harvard Medical School, Boston, 1893; died November 30, aged 77, of chronic myocarditis.

Ezra E. Dickason, Brownsville, Texas; University of Louisville (Ky.) Medical Department, 1891; died in December, aged 79, of myocardial failure.

Augustus Sherman Downs ✦ Saratoga Springs, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1899; on the staff of the Saratoga Hospital; died in Bradford, Pa., December 8, aged 75, of coronary thrombosis.

Joy Harris Glascock, Greensboro, N. C.; Woman's Medical College of Baltimore, 1896; honorary member of the Medical Society of the State of North Carolina; member of the American Medical Association; died recently, aged 82, of myocarditis.

Thomas Wilkin Gunter, Paxville, S. C.; Medical College of the State of South Carolina, Charleston, 1908; died December 27, aged 62, of chronic myocarditis.

Edgar S. Harris, Independence, Mo.; Medico-Chirurgical College of Kansas City, Mo., 1899; died in the Independence Sanitarium and Hospital November 27, aged 68, of uremia.

Herman Leo Harris ✦ Columbus, Ohio; Ohio Medical University, Columbus, 1897; member of the staff of the Mercy Hospital, where he died December 15, aged 78.

Ernest Downing Hatch, Boston; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1909; formerly associated with the U. S. Public Health Service Reserve; died November 26, aged 74, of generalized arteriosclerosis.

Harry Ashford Haze ✠ Lansing, Mich.; University of Michigan Department of Medicine and Surgery, Ann Arbor, 1895; served during the Spanish-American War; on the staff of the Edward W. Sparrow Hospital; member of the first state board of registration in medicine; died December 23, aged 77, of carcinoma of the prostate.

James S. Hedrick, Ada, Ohio; Starling Medical College, Columbus, 1882; died November 6, aged 86, of chronic arthritis and enlarged prostate gland.

Wilbur Randolph Hurst, Pasadena, Calif.; Rush Medical College, Chicago, 1912; fellow of the American College of Surgeons; served during World War I; member of the staffs of the Deaconess, St. Mary's and Welborn-Walker hospitals, Evansville, Ind.; died March 6, aged 60, of heart disease.

William Walter Johnston, Savage, Mont.; University of Minnesota College of Medicine and Surgery, Minneapolis, 1902; died in Byron, Minn., November 12, aged 70, of heart disease.

Robert Turner Jones ✠ Harford, Pa.; Jefferson Medical College of Philadelphia, 1937; interned and served a residency at the Moses Taylor Hospital in Scranton; began active duty as a captain in the medical corps, Army of the United States, on May 11, 1942; relieved from active duty Oct. 3, 1945; died November 24, aged 35, of coronary thrombosis.

James Rossiter Kellogg, Portage, Wis.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1901; died November 25, aged 70, of heart disease.

Frank J. Kessler, Easton, Pa.; University of Pennsylvania Department of Medicine, Philadelphia, 1893; member of the American Medical Association; formerly secretary of the Northampton County Medical Society; served as member of the board of education, member of the city civil service commission for selecting policemen, police surgeon and deputy coroner of Northampton County; died in the Betts Hospital December 24, aged 76, of pneumonia.

Walter Ellwood Kiefer, New York; Medico-Chirurgical College of Philadelphia, 1911; member of the American Medical Association; medical examiner for the Pennsylvania Railroad; died recently in Arlington (Va.) Hospital, aged 62, of coronary thrombosis.

John Ferdinand Klinedinst ✠ York, Pa.; University of Maryland School of Medicine, Baltimore, 1889; member of the American Academy of Ophthalmology and Otolaryngology; formerly member and secretary of the U. S. Examining Board for Pensions in York County; past president of the York County Medical Society; on the staff of the York Hospital, where he was a member of the board of directors and where he died December 6, aged 78, of cerebral hemorrhage.

Emory Leroy Kniskern ✠ Muskegon, Mich.; University of Michigan Department of Medicine and Surgery, Ann Arbor, 1895; past president of the Muskegon County Medical Society; on the staff of the Hackley and Mercy hospitals and the Muskegon County Sanatorium; died January 26, aged 77, of subacute bacterial endocarditis.

Benjamin Franklin Lorance ✠ Auburn, Neb.; State University of Iowa College of Medicine, Iowa City, 1887; served as secretary of the Nemaha County Medical Society; county medical adviser; author of "Medi-Cult"; died December 4, aged 87.

Frank Cyrus McCue ✠ Charlottesville, Va.; University of Virginia Department of Medicine, Charlottesville, 1898; formerly secretary-treasurer of the Albemarle County Medical Society; at one time superindendent of the Martha Jefferson Hospital and Sanitarium; died December 1, aged 71, of coronary occlusion.

William Andrew McKenney ✠ Falmouth, Ky.; Medical College of Ohio, Cincinnati, 1890; served during World War I; secretary of the Bracken-Pendleton Counties Medical Society; county health officer; at one time chairman of the county democratic committee; died December 24, aged 78, of heart disease.

John M. McMillan, Candor, N. C.; Atlanta College of Physicians and Surgeons, 1909; member of the American Medical Association; honorary member of the Medical Society of the State of North Carolina; on the courtesy staff of the Moore County Hospital in Pinehurst, where he died December 6, aged 63, of coronary heart disease.

Clifford David Mercer ✠ West Union, Iowa; Northwestern University Medical School, Chicago, 1908; fellow of the American College of Physicians; life member of the Iowa State Medical Society; past president of the Fayette County Medical Society; served during World War I; commissioner of insanity for Fayette County for fifteen years; member of the medical advisory board, World War II; health officer of West Union for twenty-five years; on the staff of the West Union Hospital; died December 25, aged 61, of coronary occlusion.

Frederick Walter Minty ✠ Rapid City, S. D.; Sioux City College of Medicine, 1904; fellow of the American College of Surgeons; on the staffs of the Black Hills General and St. John's hospitals; died November 24, aged 63, of coronary thrombosis.

Frank Armington Morrill, Somerset, Mass.; College of Physicians and Surgeons, medical department of Columbia College, New York, 1876; died December 30, aged 92, of mitral insufficiency.

Charles L. Mullins, Phoenix, Ariz.; Omaha Medical College, 1891; found dead recently, aged 78.

Mary A. Naylor, Pittsburgh; Woman's Medical College of Pennsylvania, Philadelphia, 1909; for many years medical examiner for the board of education in Pittsburgh; at one time taught in the public schools in Oil City, Pa.; died December 8, aged 78, of cerebral hemorrhage.

Douglas Steffian Nisbet ✠ Passed Assistant Surgeon, U. S. Public Health Service, Philadelphia; University of Pennsylvania School of Medicine, Philadelphia, 1940; entered the public health service in 1941; diplomate of the National Board of Medical Examiners; died in the U. S. Marine Hospital, Baltimore, January 25, aged 30, of carcinoma of the testis.

John Howard F. O'Neil ✠ Chicago; Illinois Medical College, Chicago, 1904; died in the Evangelical Hospital December 20, aged 61, of cirrhosis of the liver and hemorrhage from bleeding esophageal varices.

Alfred Vandiver Parsons, Washington, D. C.; University of Maryland School of Medicine, Baltimore, 1889; died in the Garfield Hospital December 29, aged 82, of bronchopneumonia and adenocarcinoma of the ascending colon.

James William Payne, Monticello, Ga.; Atlanta Medical College, 1914; died recently, aged 56, of carcinoma of the mouth.

Meyer Perlstein, Newton, Mass.; Middlesex University School of Medicine, Waltham, 1939; died in Boston November 11, aged 36, of carcinoma of the colon.

William Henry Phillips ✠ Cleveland; Cleveland Medical College, Homeopathic, 1893; fellow of the American College of Surgeons; on the staffs of the Huron Road, East Cleveland, and the Glenville Hospital; died December 19, aged 74, of cardiac decompensation.

Ernest Wesley Rimer ✠ Breckenridge, Minn.; Chicago College of Medicine and Surgery, 1908; a graduate in pharmacy; served overseas in the British medical corps during World War I and as city and county health officer; division surgeon for the Great Northern and Northern Pacific railways; on the staffs of St. Mary Hospital in Wahpeton, N. D., and St. Francis Hospital; died December 22, aged 63, of coronary thrombosis.

Frank Ritter ✠ Louisville, Ky.; University of Louisville Medical Department, 1911; on the staff of St. Joseph Infirmary; died December 3, aged 58, of coronary occlusion.

George T. Ritter, Williamsport, Pa.; Jefferson Medical College of Philadelphia, 1908; member of the American Medical Association; for three terms a member of the school board, serving as president from 1931 to 1939; awarded the Grit meritorious award in 1937 in recognition of his leadership in educational affairs; died in Johns Hopkins Hospital, Baltimore, recently, aged 68, of pneumonia due to hypernephroma.

Fred Rudnick, Chicago; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1905; member of the city health department; on the staff of St. Elizabeth's Hospital; died in the Norwegian American Hospital December 21, aged 71, of cerebral hemorrhage.

Charles Montgomery Russell, Columbia, Ky.; Kentucky School of Medicine, Louisville, 1890; University of Louisville Medical Department, 1891; past president of the Adair County Medical Society; for many years county coroner; died December 6, aged 75, of chronic myocarditis.

Henry Leonidas Scarborough, Conway, S. C.; Medical College of the State of South Carolina, Charleston, 1912; member of the American Medical Association; on the staff of the Conway Hospital; died December 18, aged 59, of coronary thrombosis.

William H. Schnell ✠ Superior, Wis.; Milwaukee Medical College, 1912; formerly associated with the U. S. Public Health Service; served as chief surgeon of the Great Northern and the Soo Line railroads and as chief of staff of St. Mary's Hospital, where he died December 9, aged 60, of coronary occlusion.

Dixie C. Secord, Sumner, Neb.; Western University Faculty of Medicine, London, Ont., Canada, 1906; died December 4, aged 63, of uremia.

Edwin Stanton Sherrill, Detroit; College of Physicians and Surgeons, medical department of Columbia College, New York, 1885; served as city health officer and member of the board of education; in 1920 the Edwin S. Sherrill Elementary School was named for him; died December 30, aged 91, of cardiac decompensation and bronchopneumonia.

Ferdinand Shoemaker ✠ Kansas City, Mo.; Georgetown University School of Medicine, Washington, D. C., 1891; member of the American Academy of Ophthalmology and Otolaryngology and the Medical Society of the State of Pennsylvania; fellow of the American College of Surgeons; formerly affiliated with the Indian Service and with the Veterans Administration facilities in Excelsior Springs and Kansas City; died in St. Mary's Hospital December 19, aged 77, of carcinoma of the colon.

Harry Marquis Smith ✠ Canandaigua, N. Y.; University and Bellevue Hospital Medical College, New York, 1912; fellow of the American College of Surgeons; at one time county coroner; affiliated with the Frederick Ferris Thompson Hospital; medical examiner and surgeon for the Pennsylvania and New York Central railroads; died December 27, aged 57, of coronary occlusion.

George Reuben Sorrell ✠ Washington, D. C.; Columbian University Medical Department, Washington, D. C., 1898; died in the Sibley Hospital December 10, aged 69, of cerebral hemorrhage and cardiovascular renal disease.

Nathan W. Stallard, Dungannon, Va.; College of Physicians and Surgeons, Baltimore, 1885; past president of the Scott County Medical Society; member and chief examining physician of the Scott County Draft Board during World War I; for many years pension examiner for the war department, secretary of the county board of health and postmaster of Dungannon; served as a member of the town council; died December 18, aged 83, of cardiac failure.

Thomas Milton Stewart ✠ Cincinnati; Pulte Medical College, Homeopathic, Cincinnati, 1887; formerly professor of ophthalmology at his alma mater; member of the American Academy of Ophthalmology and Otolaryngology; fellow of the American College of Surgeons; served as a member of the staff of the Bethesda Hospital, where he died December 10, aged 79, of duodenal ulcer.

George G. Strickland, Philadelphia; Howard University College of Medicine, Washington, D. C., 1898; one of the founders and for many years affiliated with the Mercy Hospital; died December 27, aged 76, of arteriosclerosis.

Samuel Meredith Strong ✠ Flushing, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1902; past president of the Dutchess County Medical Society; served during the Spanish-American War and World War I; affiliated with the Flushing Hospital; died in the Columbia Presbyterian Medical Center, New York, February 2, aged 68, of carcinoma of the stomach.

John Ritter Sutter ✠ Edwardsville, Ill.; Washington University School of Medicine, St. Louis, 1907; for many years county physician; died December 3, aged 64, of coronary heart disease.

Walton Tackett, East Moline, Ill; Barnes Medical College, St. Louis, 1907; member of the American Medical Association and the American Psychiatric Association; affiliated with the East Moline State Hospital, where he died December 14, aged 66, of coronary occlusion.

Gertrude Frances Thompson, Chicago; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1903; member of the American Medical Association; on the staff of the Women and Children's Hospital; died December 29, aged 78, of coronary thrombosis.

Thomas Lewis Thomson, Kingsmill, Ont.; Western University Faculty of Medicine, London, Ont., Canada, 1905; for many years a practitioner in Ann Arbor, Mich.; died in the Victoria Hospital, London, Ont., December 4, aged 67, of hypertensive heart disease with mesenteric artery thrombosis.

James B. Transou, Atlanta, Ga.; Meharry Medical College, Nashville, Tenn., 1917; died December 7, aged 52, of hypertensive heart disease.

Benjamin Vaughan ✠ Louisville, Ky.; Louisville Medical College, 1906; on the staff of the SS. Mary and Elizabeth Hospital, where he died December 9, aged 66, of cerebral hemorrhage.

Robert Andrew Warren ✠ Cleveland; Western Reserve University School of Medicine, Cleveland, 1914; member of the Cleveland Academy of Medicine; on the staffs of the Huron Road Hospital, East Cleveland, and the Woman's Hospital, where he was formerly chief of staff; died December 25, aged 61, of coronary thrombosis.

Frederick William Weston ✠ Tustin, Calif.; University of Toronto Faculty of Medicine, Toronto, Ont., Canada, 1913; died December 1, aged 61, of coronary occlusion.

DIED WHILE IN MILITARY SERVICE

Gordon Horatio Hammill, Euclid, Ohio; Ohio State University College of Medicine, Columbus, 1928; member of the American Medical Association; began active duty as a captain in the medical corps, Army of the United States, on Sept. 23, 1942; died in Japan Oct. 4, 1945, aged 41, in an airplane crash.

Clinton Childs Horton Jr., Pendleton, S. C.; Emory University School of Medicine, Atlanta, 1944; interned at the Roper Hospital in Charleston; commissioned a lieutenant (jg) in the medical corps of the U. S. Naval Reserve on July 1, 1945; stationed in the psychiatric section of the Naval Hospital in New River, N. C.; killed Oct. 3, 1945, aged 24, in an automobile accident near Fayetteville, N. C.

Hickman Clark Howell, Springfield, Mo.; St. Louis University School of Medicine, 1943; interned at St. John's Hospital in St. Louis; began active duty as a first lieutenant in the medical corps, Army of the United States, on Sept. 15, 1944; accidentally drowned in Luzon, P. I., Sept. 9, 1945, aged 25, while boating on a lake.

Charles Floyd Jump ✠ Helena, Mont.; University of Michigan Department of Medicine and Surgery, Ann Arbor, 1904; member of the Montana Academy of Otolaryngology; commissioned a lieutenant in the medical corps of the Second Montana Infantry; from June to November 1916 served as a captain in the Montana National Guard along the Mexican border; served as a major with the 163d infantry in France during World War I; discharged Aug. 6, 1919; began active duty as a major in the medical corps, Army of the United States, on Sept. 5, 1942, assigned as state medical officer for the Montana headquarters of Selective Service; promoted to lieutenant colonel; died in the Veterans Administration Facility, Fort Harrison, Oct. 23, 1945, aged 63, of coronary occlusion.

James Wilson Mader Jr., McKeesport, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1937; interned at the Western Pennsylvania Hospital in Pittsburgh; served as a fellow in surgery at the Mayo Foundation in Rochester, Minn.; began active duty as a lieutenant (jg) in the medical corps of the U. S. Naval Reserve on Aug. 4, 1941; later promoted through the grades to commander; died in Mexico City, Mexico, Dec. 19, 1945, aged 32, of heart disease.

John A. Marsico, Elyria, Ohio; Ohio State University College of Medicine, Columbus, 1930; member of the American Medical Association; interned at St. Francis Hospital in Columbus; captain, medical corps, Army of the United States; captured by the Japanese in the fall of Corregidor in 1942; died in Japan Jan. 27, 1944, aged 39, of cerebral hemorrhage.

Thomas William Miller ✠ Alton, Ill.; St. Louis University School of Medicine, 1927; interned at St. Mary's Hospital in East St. Louis and St Luke's Hospital in Chicago; on the staffs of St. Joseph's and Alton Memorial hospitals; began active duty as a lieutenant commander in the medical corps of the U. S. Naval Reserve on May 3, 1943; died in San Francisco Aug. 29, 1945, aged 43, of extreme multiple injuries received in an automobile accident.

Charles Joseph Mooter, Omaha; Creighton University School of Medicine, Omaha, 1941; interned at the Creighton Memorial St. Joseph's Hospital; began active duty as a first lieutenant in the medical corps, Army of the United States, on July 1, 1942; promoted to captain; died in New Caledonia Dec. 15, 1944, aged 27, in an automobile accident.

Foreign Letters

LONDON LETTER

(From Our Regular Correspondent)

Feb. 28, 1946.

An Improved Mental Health Service: Mental Disorders Not Increased by the War

An important survey of neurotic disorders and treatment facilities by Dr. C. P. Blacker has just been published in book form entitled "Neurosis and Mental Health Services." It was carried out with the encouragement of the Ministry of Health and the assistance of experts and is largely based on reports from 216 clinics dealing with mental disorder. The origin of the survey was the question of the possible increase in neurotic disorders as the result of air raids. The important conclusion is reached that there are no grounds for supposing that the war has caused an increase in the more serious forms of mental disorder requiring admission to a hospital. This is remarkable in view of the heavy bombing, with considerable loss of life and injuries to persons and destruction of buildings in our cities while the country was passing through the greatest danger to which it ever was exposed. Few persons were without acute anxiety for husband, son or friend fighting for more than five years all over the world. The absence of increase in the serious forms of mental disorder is in consonance with the improvement in vital statistics frequently reported in THE JOURNAL. It is evidence of the grit of the people, who for a time faced the German peril alone.

The threat remains that the coming years may show an increase in neurotic disorder as a result of the difficulties of adjustment associated with demobilization and the return of prisoners who have endured German barbarities. Dr. Blacker thinks that it is possible that latent neurosis may reveal itself in the civilian population when the stresses of war are relaxed. The number of mental clinics have been increased as a result of the Mental Treatment Act of 1930, but there are still not enough. Dr. Blacker holds that the problem of psychiatric disorders is largely sociological—that they could be reduced or mitigated by better education of adults in the sensible handling of children, by educational services in which abnormalities are detected early, and by better industrial, occupational and social psychiatry. Teaching psychiatric units should be established in the university medical schools, each under the direction of a professor. Outside mental hospitals with 100 beds for each million of population should be provided for psychiatric inpatients, and outpatient clinics should be extended by 75 to 100 per cent. There should also be child psychiatric clinics. A medical officer of mental health should be appointed for the coordination of mental health services. The picture is a mental health service integrated with the new health service.

The London Municipal Hospital Service

The London County Council maintains seventy-six hospitals, probably the largest unified hospital service in the world. This service is separate from the older voluntary hospitals, to which the London medical schools belong. The council hospitals have developed from municipal infirmaries originally established for the care of the indigent. To convert these institutions into modern hospitals the council since 1930 has spent $20,000,000. There was severe damage from German bombing for which the cost of necessary repairs is estimated at $10,400,000. A comprehensive report on the restoration and development of the council's general and special hospital service has been made by a committee. It is proposed that more units be provided for specialized treatment and for rehabilitation in addition to those already established before the war. These centers include special units for the treatment of thyroid disease, rheumatism, diabetes, plastic surgery, thoracic surgery and radiotherapy, neurosurgery and fractures.

War Work of the American Ambulance in London

The American Ambulance in Great Britain, which is being wound up after a distinguished record of war service, has made a gift of $100,000 from its surplus funds to the Middlesex Hospital. The fund will be used to endow two single bed wards to which members of the staff of the American embassy and other citizens of the United States will have first claim. Col. J. J. Astor, chairman of the board of management, said that he had already expressed the nation's thanks for the magnificent work of the American Ambulance. In the hour of our greatest need, when our circumstances were black and indeed desperate, a group of American citizens in London conceived and created it. The gift would perpetuate the good relations which had always existed between the hospital and the American embassy and individual Americans in London. In a further tribute to American organization in the war Surgeon Rear Admiral Gordon-Taylor said that when the College of Surgeons was badly damaged and its Hunterian Museum almost destroyed the American Ambulance came to its aid with seventy-eight ambulances and removed 26,000 specimens to various parts of the country.

THE NETHERLANDS

(From Our Regular Correspondent)

AMSTERDAM, Jan. 20, 1946.

German Experiments at Auschwitz Camp

An official, juridically and medically confirmed report is published in the *Nederlandsch Tijdschrift voor Geneeskunde*, **31**:364, 1945, by E. DeWind, physician concerning experiments by the Germans carried out at the Auschwitz Camp on 612 women of various nationalities.

Professor Samuels of Cologne, on instructions from S. S. Hauptsturmführer Wirths, used 200 women, removing under anesthesia parts of the portio uteri for histologic investigation in search of early stages of cancer. Another distressing but less harmful experiment was intravaginal uterine photography. Most of the victims were later killed in gas chambers, and Samuels himself was shot.

Professor Schumann subjected 15 girls of 17 to 18 years of age to ultrashort wave treatment directed at the ovary. Several victims were badly burned, one of them dying as a result of this first stage of the experiment. One month later, transverse and longitudinal laparotomy was performed in two stages for total extirpation and inspection of the ovaries. Nine laparotomies were performed in as many quarters of an hour, without resterilization between these operations. Several mortal and permanently disabling sequels followed.

Professor Clauberg, progesteron expert, together with Dr. Goebel, both Gestapo men, investigated in the majority of the remaining victims substitutes for the x-ray contrast substance lipiodol. These investigations were prompted by a shortage of iodine. The subjects were bought from the S. S. With pressure generated by an electric pump, a viscous fluid was forced into the uterus, under x-ray control and without anesthesia, causing great discomfort. Every subject served for two to six experiments. Some of the victims died as a result of genital or peritoneal infections when the fluid penetrated the abdominal cavity. Many victims who survived were later gassed. About 50 Netherlands women, who lived through Clauberg's experiments, escaped and are expected to return to this country.

S. S. Oberstrumführer Weber and S. S. Oberscharführer Münch performed comparatively innocent blood group, malaria and toxicology tests.

Occasional pregnancies, for which arrangements seem to have existed in the camp, were interrupted in the seventh month, after the fetus had been killed.

Starvation Diseases Under the Japanese in the Far East

A. Colaço Belmonte has recently reported his experiences as a prisoner of war of the Japanese (*Nederl. tijdschr. v. Geneesk.* **32**:419 [Dec.] 1945). During three and one-half years of captivity the average mortality of prisoners of war from hardship and disease was approximately 25 per cent. Adequate medical care was deliberately withheld. Forced labor, chiefly in the coal mines, and systematic starvation lowered the average weight of one group of Australian prisoners of war to 51 Kg., many weighing only 38 Kg. Psychic changes resulted from confinement, particularly since a space of only 67 cm. was allowed each man in some camps in Java. The mortality from pneumonia was 22 per cent. Skin infections, including gangrenous furunculosis, were frequent. In one group in Java the author reports that, despite rapid weight loss, prisoners exhibited unimpaired vigor for about eight months. There was then observed a wide variety of symptoms, including painful extremities not relieved by analgesics, paresthesias, increased sweating of the feet, peroneal paralysis, disturbances of sensation especially for temperature, polyneuritis, deafness and visual disturbances, including central scotomas. Blindness occurred without fundus changes. Beriberi symptoms were not identified, but edema, gait changes due to abductor palsy and anesthesia dolorosa were noted. The response to vitamin and increased protein intake was not as rapid as would be expected from classic descriptions of the cure of deficiency diseases.

BRAZIL

(From Our Regular Correspondent)

São PAULO, Feb. 16, 1946.

Clinical Forms of Schistosomiasis Mansoni

Drs. Cesar Pinto and A. Firmato de Almeida have reported observations on 500 cases of Schistosomiasis mansoni from the northern part of the state of Minas Gerais. The organs which present the most important lesions are the large intestine, the liver, the bladder, the lymph glands and the lungs. They describe a case in a boy aged 12 years with serious involvement of the nervous system, presenting epileptiform and convulsive attacks, hysteria and delirium and generalized colitis as a result of S. mansoni infestation. The nervous phenomena disappeared after treatment with antimony and potassium tartrate. The authors also report 4 unusual cases with localization of a large quantity of S. mansoni eggs in the testes and the presence of eggs in the sperm. Their observations indicate that the incidence of schistosomiasis is increasing in an alarming manner in the northern part of Minas Gerais. Special effort is necessary to avoid the creation of a situation similar to that prevailing in China and in Egypt.

Bone Changes in Pemphigus Foliaceus

There are many cases of pemphigus foliaceus ("wildfire") in the interior of the state of São Paulo. A few years ago a special service was established to combat this puzzling disease. The service is under the competent direction of Dr. João Paulo Vieira and has a hospital for the treatment and study of cases of this disease. Dr. U. Lemos Torres of the hospital has just published a paper in which he describes the frequent occurrence of bone changes in patients affected by pemphigus leading to deformities and fractures. The first problem was to determine the exact nature of the bone dyscrasia and to decide whether these changes had an endocrine basis or were the result of nutritional factors. It is known that endocrine disorders do occur in pemphigus, but they are usually of a secondary nature. Dr. Torres found on the average slightly low levels of caloric intake as well as of calcium, phosphorus and proteins, which is common among the poor patients of São Paulo hospitals. As the majority of the patients had a good appetite, Dr. Torres made a careful study of their metabolism and found that in patients with pemphigus the basal metabolic rate was greatly increased, as a rule, an increase of 50 per cent, but in some cases 100 per cent and even 150 per cent. This condition creates a relative deficiency of calcium, phosphorus and vitamin D in the diet, explaining the bone changes reported and observed in the x-ray examination of more than 80 patients studied in the report.

Brief Items

Dr. E. Velter, a French specialist in ophthalmology, has recently arrived at São Paulo, where he was welcomed by the São Paulo Society of Ophthalmology and the Center of Study of Ophthalmology.

Dr. Beatrice Berle, wife of the American ambassador to Brazil, has been awarded the National Order of the Cruzeiro do Sul for patronizing and stimulating the development of medical and social work in Brazil.

Dr. Ernesto de Souza Campos, professor of bacteriology at the University of São Paulo, has been appointed minister of health, in the new administration of President Eurico G. Dutra. Dr. Campos succeeds Dr. R. Leitão da Cunha, professor of pathology at the University of Rio de Janeiro.

Lieut. Col. S. Uchoa Cavalcante, Major Waldemar Basgal, Capt. Clovis C. de Morais and Capt. O. de Moura Plaisant have been commissioned to study, in the United States, several problems of medicine and surgery connected with the medical corps of the Ministry of Aeronautics.

An institute of radiology has been established at the Medical School of Salvador, state of Bahia, under the direction of Dr. Adelaido Ribeiro. Dr. Coolidge, from the United States, and Drs. Manuel C. Malenchini and Jayme F. Roca, from the Department of Radiology of the Rawson Hospital at Buenos Aires, Argentina, were present at the inaugural ceremony.

Personal

Dr. Gustavo Friozzi, assistant professor of medicine at the University of São Paulo, left for the United States, where he will have special training in diseases of the digestive system at the University of Pennsylvania.

Dr. João de Barros Barreto, who recently resigned as director general of the National Department of Health, has just returned from Washington, D. C., where he was the representative of Brazil at the last meeting of the officers of the Pan American Sanitary Bureau. Dr. Barreto is now director of the Division of Hygiene of the Oswaldo Cruz Institute of Rio de Janeiro.

Marriages

OSCAR LEE MCFADYEN JR., Fayetteville, N. C., to Miss Frances Donald Cochran of Statesville in February.

ISADORE VANET EPSTEIN, Memphis, Tenn., to Miss Gertrude Sylvia Berman of Washington, D. C., February 10.

Z. BERT FRIEDENBERG, New York, to Miss Ruth B. Stratton of Townshend, Vt., at Philadelphia, February 16.

LEROY B. MATTHEWS, Memphis, Tenn., to Miss Polly Shaw Townsend in Columbia, S. C., February 17.

MARTHA SUE LEWANDOSKI, Little Rock, Ark., to Mr. Howard T. Story of St. Joseph, Mo., January 13.

MERRILL D. EVANS, Kansas City, Mo., to Miss Mary Gentilcore of Youngstown, Ohio, February 9.

HAROLD D. FREEDMAN, Lenoir City, N. C., to Miss Marjorie E. Fennen of Cincinnati, February 9.

CHARLES W. BROWN JR., Hamlet, N. C., to Miss Lois Little of Connersville, Ind., February 3.

CYRIL JOSEPH COSTELLO, Temple, Texas, to Miss Julia Ann Leahy in St. Louis in January.

Correspondence

TREATMENT OF SHOCK

To the Editor:—Crossman and Allen (THE JOURNAL, January 26, p. 185) in their remarks on shock state that it has been proved that isotonic solution of sodium chloride is equal or superior to plasma in the treatment of shock. Crossman in his further discussion of his article states that "great numbers of lives and limbs were unquestionably sacrificed by the official adherence to . . . pure plasma infusions." Such statements, based on animal experimentation, are directly contrary to the overwhelming clinical experience of military and civilian physicians and are impossible to reconcile with the proved beneficial results of hundreds of thousands of plasma infusions. My recent service in the army was intimately connected with the production of both plasma and whole blood. I am aware of no basis of fact for Dr. Crossman's remarks.

The specific aim of the treatment of shock is the restoration of an adequate blood circulation to combat anoxemia of the tissues. Shock, accompanied by hemorrhage, should be treated with whole blood transfusions. When whole blood is not available, plasma should be administered until blood can be obtained. The use of plasma is particularly indicated in traumatic or operative shock not associated with hemorrhage. Isotonic solution of sodium chloride is useful for replacement of fluid and electrolytes but will not, per se, overcome severe shock.

It can be inferred from these authors' remarks that the countless physicians in both military and civilian status who have taken pride in the thought that their prompt use of plasma has saved lives have been ill advised, not to mention over thirteen million donors who have given their blood for plasma during the recent war. Such, I do not believe, is true.

LESLIE HUGHES TISDALL, M.D., Brooklyn.

CONGENITAL CATARACTS IN SISTERS WITH CONGENITAL ECTODERMAL DYSPLASIA

To the Editor:—I have read with great interest the suggestion of Dr. S. J. Thannhauser (Differential Diagnosis of Ectodermal Dysplasia and of Rothmund's syndrome, THE JOURNAL, January 26, p. 238) that the patients described are examples of Rothmund's syndrome. I am inclined to agree with his suggestion after looking up the pertinent literature on the subject (including Rothmund, A.: Ueber Katarakt in Verbindung mit einer eigenthümlichen Hautdegeneration, *Arch. f. Ophth.* **14**: 159, 1868. Seefelder, R.: Ueber familiäres Auftreten von Katarakt und Poikilodermie, *Ztschr. f. Augenh.* **86**:81 [May] 1935. Schnyder, H. F.: Ueber Katarakt bei poikilodermieartiger Hauterkrankung, *Klin. Monatsbl. f. Augenh.* **92**:408, 1934. Thannhauser, S. J.: Wermer's Syndrome [Progeria of the Adult] and Rothmund's Syndrome: Two Types of Closely Related Heredofamilial Atrophic Dermatoses with Juvenile Cataracts and Endocrine Features: A Critical Study with Five New Cases, *Ann. Int. Med.* **23**:559 [Oct.] 1945). I apologize that this syndrome in the literature had not been encountered. In this I was not the only guilty party (Bloch, Bruno, and Stauffer, H.: Skin Diseases of Endocrine Origin (Dyshormonal Dermatoses), Poikiloderma-like Changes in Connection with Underdevelopment of Sexual Glands and Dystrophis Adiposogenitalis, *Arch. Dermat. & Syph.* **19**:22 [Jan.] 1929).

Dr. Thannhauser's explanation of the causation of these allied dermatoses, congenital ectodermal dysplasia of the hydrotic and anhydrotic type and of Rothmund's syndrome, is also a new approach to a perplexing etiologic subject. While the attempt has been generally made to classify these dysplasias under the two headings, there have been so many *formes frustes*, variants and so on that the physician has had to be very agile to keep ahead of the race. Thus Thannhauser (Hereditary Ectodermal Dysplasia of "Anhydrotic Type," with Symptoms of Adrenal Medulla Insufficiency and with Abnormalities of Bones of Skull, THE JOURNAL, March 14, 1936, p. 908) reports a typical anhydrotic type of ectodermal dysplasia with low fasting blood sugar, flat sugar tolerance curve and low blood pressure (adrenal medulla disturbance). Roentgenograms showed exostoses of the tables of the skull. Osseous tissue is of mesodermal origin, and this case was not a purely congenital ectodermal dysplasia of the anhydrotic type. I have also had difficulty in putting such a case under the proper heading from the developmental standpoint if we are to continue to use the term congenital ectodermal dysplasia. I regret that I am not sufficiently versed in disturbances of the germ plasm theory, but perhaps this is the best method of explaining these cases: "in ectodermal dysplasia there is a defect restricted to the ectodermal germ layer, while in Rothmund's syndrome a multiple germ plasm defect" is possible as there is blood vessel involvement, mesodermal tissue (Wilkins, Lawson, and Fleischmann, Walter: Ovarian Agenesis, *J. Clin. Endocrinol.* **4**:357 [Aug.] 1944). Of course Rothmund suggested as far back as 1868 that the condition he described was an ectodermal dysplasia, and it is true that most of the involvement found in the disease is of true ectodermal type.

H. N. COLE, M.D., Cleveland.

SEKOV DANGEROUS TO HEALTH

[In THE JOURNAL, Nov. 24, 1945, page 904, appeared an item relative to a product called Sekov, a nostrum containing thyroid, which was being sold in California. Now a letter has been received from the Bureau of Food and Drug Inspections of the California State Department of Public Health defining the present status of the product in California. The letter follows.—ED.]

To the Editor:—We note with interest the article on Sekov which appeared in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION on Nov. 24, 1945, page 904, under "Bureau of Investigation." We note particularly the following statement in said article,

> Thus the public outside of California is to be protected from the risk involved in taking Sekov. Whether the California officials will be willing to "harm home industry" by restricting the sale of Sekov in its own state or simply follow the "caveat emptor" policy, remains to be seen.

You have evidently been misinformed as to the method of distribution of Sekov in California. We had already stopped the sale of Sekov prior to the federal government's doing so. One cannot buy at retail a package of Sekov in this state.

This firm, however, has circumvented the California Pure Drugs Act and Pharmacy Law and other laws applicable to such dangerous products as thyroid by having on the payroll of its establishment a licensed medical practitioner who examines and prescribes Sekov to all persons referred to that firm.

We have tried ordering this product through the mail, which requests this firm refused; however, it did mail the order blank to us, and when our undercover agent called at its place of business she was immediately told that it would be necessary to have the firm's doctor make a complete examination and that the fee would be $5 which would be refunded after the purchase of the thirty day supply and any additional supplies which may be suggested by the doctor. In other words, before the average purchaser obtains one treatment she spends approximately $20. We have attempted on eleven different occasions to buy Sekov but we were unsuccessful; however, we could have purchased it had we submitted to the doctor's examination.

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The attorney general of the state of California has advised us that owing to the fact that a licensed physician and surgeon prescribes this product we do not have a case.

You can readily see that the modus operandi used by this firm in employing a licensed physician and surgeon to "cover up" for it in carrying on its business presents a far different problem to the state of California than it did to the United States Food and Drug Administration.

If it were not for the fact that there are renegades in the medical profession, California would be able to protect amply any citizen purchasing such a product as Sekov. We have diligently enforced the pure food and drug laws in this state and have successfully restricted the sale of preparations containing thyroid except on the prescription of a licensed medical practitioner, but the mere fact that this firm employs a licensed medical practitioner defeats the purposes of all the laws here in California.

Not with any view in mind of boasting, we want to say that the enforcement of the California Pure Drugs Act and the laws applicable to frauds are enforced in this state.

In view of the facts presented, we feel that the statement implying the laxity of the protection afforded the public in regard to this product here in California should be retracted. We want to say at this time that we hold no animosity against THE JOURNAL. In fact, the bureau of which I am chief holds your organization in high regard.

MILTON P. DUFFY, Los Angeles.
Chief, Bureau of Food and Drug Inspections, Food and Drug Inspection Section, State of California Department of Public Health.

RADIUM

To the Editor:—In the article entitled "Radium" in THE JOURNAL, January 26, Desjardins and Williams state on page 211 that "in cavernous nevus the course of the disease is favorably influenced" and "the treatment is lengthy and tedious." The second sentence should be qualified by saying that the treatment is lengthy and tedious in respect to extensive and deep seated cavernous angiomas but not so in small and relatively superficial vascular birth marks. Many of them respond readily to treatment with radium plaques.

It should, in my opinion, be stressed that small, slowly growing simple angiomas in infants almost always regress without treatment as the child grows older. Angioma simplex in adults is indeed a rarity.

Attention should also be directed to the fact that the flat vascular nevus—the port wine stain—does not respond to radiation therapy. If the dosage in such lesions is so large as to produce destruction of the blood vessels, then scarring, atrophy and pigmentation will be the final outcome. Port wine stains may often be readily concealed with suitably tinted pastes and creams.

FRED WISE, M.D., New York.

FELLOWSHIPS IN PUBLIC HEALTH

To the Editor:—The New York State Department of Health has available a limited number of fellowships for young physicians desirous of obtaining necessary field and academic experience to qualify for full time public health positions.

Six to twelve months of orientation in field work are provided under the guidance of experienced district state health officers. This is followed by an academic year at a postgraduate school of public health leading to a degree in public health. A generous stipend is allowed during both the field and the academic training periods, and tuition is paid at the school of public health. Candidates for the fellowship must possess at least the following basic qualifications: U. S. citizenship; graduation from a medical school approved by the American Medical Association; one year's internship in a hospital approved for such internship by the American Medical Association; license to practice medicine in New York State or eligibility to take the examination to obtain such license. The upper age limit is 35 years.

Physicians who complete the fellowship are professionally qualified for full time appointment on the staff of most local and state health departments.

In order to complete at least six months' field experience prior to the beginning of the next academic year, candidates must be appointed not later than March 15. A few fellowships are still available. Physicians who are interested in making application should write to the State Department of Health, Albany 1, N. Y.

EDWARD S. GODFREY JR., M.D., Albany, N. Y.
Commissioner of Health.

Bureau of Investigation

COSMETICS—ADULTERATED OR MISBRANDED

Abstracts of Notices of Judgment Issued by the Food and Drug Administration of the Federal Security Agency

[EDITORIAL NOTE.—These Notices of Judgment are issued under the Food, Drug and Cosmetic Act and are designated C. N. J. The abstracts that follow are given in the briefest possible form: (1) the name of the product, (2) the name of the manufacturer, shipper or consigner, (3) the date of shipment, (4) the composition, (5) the type of nostrum, (6) the reason for the charge of misbranding or adulteration, and (7) the date of issuance of the Notice of Judgment—which is considerably later than the date of the seizure of the product and somewhat later than the conclusion of the case by the Food and Drug Administration.]

Alexandra de Markoff Cleansing Cream.—Alexandra de Markoff, Inc., New York. Shipped between Dec. 27, 1943, and March 22, 1944. Adulterated because it contained a hair dye color known as "butter yellow," a non-permitted coal tar dye known to possess carcinogenic properties.—[*C.N.J., F.D.C. 102; January 1945.*]

Gold Coast Hair Lacquer.—Robinson Company, Chicago. Shipped August 12, 1943. Adulterated because it contained a poisonous substance (not named) which might have rendered it injurious to those who applied it under the conditions of use prescribed in the label—"Can be sprayed or padded on."—[*C.N.J., F.D.C. 98; January 1945.*]

Hubere Hair Lacquer and Hair Lacquer Pads.—Hubere Cosmetics, Chicago. Shipped between July 28 and August 18, 1943. Both Lacquer and Pads adulterated because they contained a poisonous substance (not named) which might have rendered them injurious to users under the conditions prescribed in the labeling and also those that are customary and usual.—[*C.N.J., F.D.C. 96; January 1945.*] An additional Notice of Judgment, for the same reason as above, was reported in *C.N.J. 97*, issued against Bailey's Beautician Supply Company, Chicago, which had shipped a consignment of Hubere Hair Lacquer Pads July 26 and August 2 and 9, 1943.

Miracle Aid for Wrinkles.—Miracle Products, Chicago. Shipped between Nov. 27, 1943, and June 7, 1944. Composition: essentially water, with small amounts of protein, such as egg white, with salt and perfume. Misbranded because bottle label and accompanying circulars falsely represented that article would be effective in removing wrinkles and double chin, and would supply skin tissue protein to body.—[*C.N.J., F.D.C. 110; January 1945.*]

Oliv-Tone for Hair and Scalp.—Great Atlantic Laboratories, Boston. Shipped Feb. 8 and April 12, 1944. Adulterated because it contained a coal-tar color known as "butter yellow," the use of which is forbidden in cosmetics, because of its carcinogenic properties. Misbranded because the name "Oliv-Tone" gave the false impression that the product contained olive oil.—[*C.N.J., F.D.C. 103; January 1945.*]

Pierrette Custom Process of Cold Permanent Waving.—Pierrette, Los Angeles. Shipped July 7, 1942. Adulterated because it contained a poisonous substance, ammonium hydrogen sulfide, which might have rendered it injurious to persons applying it under the customary conditions of use.—[*C.N.J., F.D.C. 99; January 1945.*]

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Dental Practice Acts: Conviction for Assault Constitutes a Felony.—Consolidated Laws, chapter 16, article 49, section 1311, subdivision 12 (the Education Law) provides in part that:

> A conviction of felony shall forfeit a license to practice dentistry, and, upon presentation to the department or a county clerk by any public officer or officer of a dental society of a certified copy of a court record showing that a practitioner of dentistry has been convicted of felony, that fact shall be noted on the record of license and clerk's register, and the license and registration shall be marked "canceled."

Petitioner, a licensed dentist, was indicted for assault in the first degree, a felony, and pleaded guilty. Pursuant to the law quoted, his license to practice dentistry was canceled. He then filed suit to annul the action of the defendant State Board of Dental Examiners. From an order confirming the revocation, petitioner appealed to the Court of Appeals of New York.

After the plea of guilty, sentence was suspended and petitioner was placed on probation for five years. It was the petitioner's contention that, since his sentence was suspended and he was placed on probation, he was not "convicted of a felony" within the meaning of those words as they are used in the Education Law. The court said that it had, on occasion, interpreted the word "conviction" to mean a verdict or plea of guilt. The word "convicted" or "conviction" is of equivocal meaning. It may mean the adjudication of guilt; it may mean the adjudication and the judgment or sentence. Continuing, the court said that in a disciplinary proceeding against a member of a profession, where the latter confesses in open court by formal plea of guilt the commission of a felony, it seems to us that the legislature clearly intended such plea to constitute conviction of a felony, even though probation followed rather than commitment to prison. Accordingly the action of the State Board of Dental Examiners in canceling the petitioner's license to practice dentistry was affirmed.—*Weinrib v. Beier, 64 N. E. (2d) 175 (N. Y., 1945).*

Optometry Practice Acts: Legality of Corporate Practice; Optometry Not a Learned Profession.—The plaintiff corporation filed suit to enjoin the defendant optometrist from making any use of a customers' list which he had obtained while in the plaintiff's employ. From a decree dismissing the plaintiff's case for want of equity, the plaintiff appealed to the appellate court of Illinois.

The plaintiff alleged that, in the operation of its retail store, it had for more than fifteen years engaged in the business of selling eye glasses "on prescription from persons authorized under the laws of Illinois to practice optometry or medicine and surgery." From August 1937 to June 1944 defendant was employed in the plaintiff's optical department, and in such position he had complete charge of the list of some five hundred prior customers of the department. He left the plaintiff's employ on a Saturday. The following Monday each name on the list received a letter from the defendant stating that he was entering private practice and soliciting the person's patronage. The plaintiff's complaint then concluded with allegations concerning the value of the list and the damage to the plaintiff resulting from defendant's using this confidential list to his own advantage. The defendant contended that the plaintiff's complaint should be dismissed for want of equity. In support of this he urged that the complaint showed on its face that the plaintiff, a corporation, was performing functions—the practice of optometry—prohibited by law to corporations. The plaintiff contended that the complaint showed no such thing and argued that, on the contrary, a corporation is exempt from the provisions of the optometry practice act.

The act provides, among other things:

> "The following persons, firms and corporations are exempt from the operation of this act: . . . (*b*)' . . . firms and corporations who shall sell eye glasses or spectacles in a store, shop or other permanently established place of business on prescription from persons authorized under the laws of this state to practice either optometry or medicine and surgery. . . ." (ch. 91, sec. 29, Ill. Rev. Stat. 1945).

We are of the opinion, said the court of appeals, that plaintiff is a corporation as described in clause (*b*) of section 92, that it sells eye glasses or spectacles on prescription from persons authorized under the statute to practice optometry and that in so doing it is exempt from the operation of the statute. Plaintiff is engaged in a lawful business. The act contemplates that licensed optometrists may be employed. Section 103 provides that permitting any person in one's employ to practice optometry, unless that person has a certificate of registration as a registered optometrist, shall constitute a misdemeanor. This language, continued the court, shows that where the person in the employ of another as an optometrist has a certificate of registration there is no violation of the statute by the employer. It is common knowledge that corporations operating department stores employ registered optometrists to examine purchasers' eyes and to prescribe glasses. We assume that the members of the general assembly possessed this knowledge. Although the optometry act has been in operation since 1919 and was amended in 1945, the legislature has not inhibited the employment of optometrists by corporations, co-partnerships or individuals who are in the business of selling eye glasses or spectacles. Referring to the case of *Silver* v. *Lansburgh & Brother,* 11 F. (2d) 518, the court quoted with approval as follows:

> Appellants, in the main, base their claim for injunctive relief upon the ground that optometry is a learned profession the very nature of which, they say, prohibits the practitioner thereof from any affiliation or connection with a corporation or nonoptometrist. . . . The court found that optometry is a mechanical art which requires skill and a knowledge of the use of certain mechanical instruments and appliances designed to measure and record the errors and deviations from the normal found in the human eye but is not a learned profession comparable to law, medicine and theology and that, though certain standards of education are prescribed by the statute and by rules of the board created under it, optometry is not a part of medicine. . . . Optometry is said by a well known writer on the subject not to be a part of medicine "either by inheritance, basic principles, development or practice." It is "an applied arm of optical science resting upon the work and discoveries of physicists and opticians through the ages down to modern times. It does not treat the eye, whether in health or disease, but adapts the light waves which enter the eye, in accordance with optical principles so as to produce focused and single vision with the least abnormal exertion on the part of the eye.

There is no more reason, concluded the court, to prohibit a corporation from employing licensed optometrists than there is to prohibit similar employment of accountants, architects or engineers. Accordingly the decree of the lower court in favor of the defendant was reversed and the cause remanded to the trial court for further proceedings.—*L. Klein v. Rosen, 64 N. E. (2d) 225 (Ill., 1945).*

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

BOARDS OF MEDICAL EXAMINERS BOARDS OF EXAMINERS IN THE BASIC SCIENCES

Examinations of the boards of medical examiners and boards of examiners in the basic sciences were published in THE JOURNAL, March 23, page 815.

NATIONAL BOARD OF MEDICAL EXAMINERS

NATIONAL BOARD OF MEDICAL EXAMINERS: Parts I and II. Various Centers. May 6-8. Part III. Various Centers, March. Exec. Sec., Mr. E. S. Elwood, 225 S. Fifteenth St., Philadelphia 2.

EXAMINING BOARDS IN SPECIALTIES

AMERICAN BOARD OF ANESTHESIOLOGY: *Oral.* New York, Oct. 9-14. Sec., Dr. Paul M. Wood, 745 Fifth Ave., New York 22.

AMERICAN BOARD OF INTERNAL MEDICINE: *Oral.* San Francisco, June 27-29. Final date for filing application is April 15. *Written.* Final date for filing application is July 1. Asst. Sec., Dr. W. A. Werrell, 1 W. Main St., Madison 3, Wis.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY: *Oral.* Chicago, May 5-12. Sec., Dr. Paul Titus, 1015 Highland Bldg., Pittsburgh.

AMERICAN BOARD OF OTOLARYNGOLOGY: Chicago, May 22-25. Sec., Dr. Dean M. Lierle, University Hospital, Iowa City, Ia.

AMERICAN BOARD OF PEDIATRICS: *Oral.* Cleveland, April 27-28 and San Francisco, July 1-5. Sec., Dr. Lee F. Hill, 3309 Forest Ave., Des Moines, Ia.

AMERICAN BOARD OF RADIOLOGY: Chicago, Nov. 27 to Dec. 1. Final date for filing application is Sept. 1. Sec., Dr. B. R. Kirklin, Mayo Clinic, Rochester, Minn.

AMERICAN BOARD OF SURGERY: *Written. Part I.* Various centers, October. Final date for filing application is July 1. Sec., Dr. J. S. Rodman, 225 S. 15th St., Philadelphia 2.

AMERICAN BOARD OF UROLOGY: *Oral.* Chicago, February 1947. Final date for filing application is Nov. 15. Sec., Dr. Gilbert J. Thomas, 1409 Willow St., Minneapolis 4.

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Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American Journal of Clinical Pathology, Baltimore

15:419-488 (Oct.) 1945

Disseminated Granuloma Venereum. E. Palik and J. R. Schenken.—p. 419.
Intermittent Fever with Lesions Simulating Those of Hodgkin's Disease: Case Report. E. A. Gall and S. G. Page Jr.—p. 431.
*Penicillin Resistance of Staphylococcus Aureus and Its Clinical Implications. H. H. Plough.—p. 446.
Determination of Bromsulphalein in Normal, Turbid, Hemolyzed or Icteric Serums. O. H. Gaebler.—p. 452.
Sarcoma of Prostate: Report of 1 Case of Rhabdomyosarcoma of Prostate. A. E. Rappoport and C. E. Nixon.—p. 456.
*Erythroblastosis Fetalis Unrelated to Rh Factor: Report of 9 Cases Suggesting Isoimmunization of Group O Mothers by A Children. S. H. Polayes and C. Ohlbaum.—p. 467.
Rh Heterozygous Mendelian Transmission in Large Family: Case Report. I. G. Frohman.—p. 471.
Tuberculoid Reaction in Retroperitoneal Neurocytoma. P. H. Hartz and A. Van Der Sar.—p. 473.
Screening Test for Identification of Allergic States. A. G. Hulett.—p. 478.
Ammonia Poisoning and Hemolytic Anemia with Bone Marrow Heterotopia. O. J. Pollak.—p. 481.

Penicillin Resistance of Staphylococcus Aureus.—Plough reports the penicillin sensitivity of 40 strains of hemolytic Staphylococcus aureus isolated from patients in an army hospital. The sensitivity ranged from complete tolerance of 4 penicillin units per cubic centimeter to inhibition by 0.002 unit per cubic centimeter. Over 40 per cent of the strains could be called resistant. Most strains isolated from patients who had received penicillin treatment were resistant. Most strains from patients who had not received penicillin were sensitive.

Erythroblastosis Fetalis Unrelated to Rh Factor.—Polayes and Ohlbaum report 3 additional cases of erythroblastosis fetalis in which the mother belonged to blood group O and the offspring to group A, with the mother's serum showing abnormally high anti-A agglutinin titers. The authors have now studied 9 cases in which the Rh factor as well as the Hr antigen were excluded as possible immunizing agents. Two of the 9 cases terminated fatally. The 2 fatal cases showed on postmortem the classic anatomic changes of erythroblastosis fetalis. Evidence is accumulating that erythroblastosis fetalis may result from isoimmunization with the A (and B?) antigen by a mechanism similar to that already established for the Rh factor.

American J. Digestive Diseases, Fort Wayne, Ind.

12:385-402 (Dec.) 1945

Nomogram for Preparation of Insulin-Protamine Zinc Insulin Mixtures. E. M. Abrahamsen.—p. 385.
*Metabolic Abnormalities in Obesity: Statistical Survey. M. A. Goldzieher, N. A. Reimer and J. W. Goldzieher.—p. 387.
Effect of Temperature on Experimental Production of Ulcers in Intestines of Dogs. R. L. Driver.—p. 394.
Inhibitory Effect of Mineral Oil on Experimental Production of Ulcers. R. L. Driver.—p. 395.
Importance of Paracolon Organisms with Salmonella and Shigella Antigens. O. Felsenfeld and Viola Mae Young.—p. 396.
Staphylococci in Gastroenterology. G. H. Chapman.—p. 399.

Metabolic Abnormalities in Obesity.—The Goldziehers and Reimer compared observations on 100 unselected cases of obesity with 100 cases of obesity clinically diagnosed as pituitary disease. It was found that the mean basal metabolic rate is lower than normal in the obese and significantly lower in pituitary obesity as well as in obese juveniles. The specific dynamic action of proteins is lower than in normal controls. A higher specific dynamic action appears in obese patients of even fat distribution and in those with regional distribution of the hypothyroid or hypogonad type. The specific dynamic action is low in pituitary obesity as well as in the juvenile group. Much higher values were obtained in the menopausal or hypogonad group. The differences observed are statistically significant. The mean of the fasting blood sugar in the obese is normal, but the distribution of the figures shows a substantial percentage in the hypoglycemic and hyperglycemic ranges. The mean blood sugar in pituitary and juvenile obesity is significantly lower. The blood uric acid is elevated in the obese. Lymphocytosis is a symptom of obesity. Lower twenty-four hour urine volume and diminished salt excretion characterize both the unselected and the pituitary type of obesity. Deviations from the normal metabolic state are so common in the obese as to assume statistical significance.

American Journal of Physiology, Baltimore

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Fate of CO in Body During Recovery from Mild Carbon Monoxide Poisoning in Man. F. J. W. Roughton and W. S. Root.—p. 239.
Elimination of Carbon Monoxide from Human Body with Reference to Possible Conversion of CO to CO_2. C. A. Tobias, J. H. Lawrence, F. J. W. Roughton, W. S. Root and M. I. Gregersen.—p. 253.
Role of Proprioceptors in Shivering. J. F. Perkins Jr.—p. 264.

American Journal of Psychiatry, New York

102:289-432 (Nov.) 1945. **Partial Index**

State Sterilization Programs for Prophylactic Control of Mental Disease and Mental Deficiency. C. J. Gamble.—p. 289.
Correlation of Preelectroshock Electroencephalogram and Therapeutic Result in Schizophrenia. W. J. Turner, L. Lowinger and J. H. Huddleson.—p. 299.
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American Journal of Public Health, New York

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The Journal is 35 Years Old. R. M. Atwater.—p. 1305.

Am. J. Roentgenol. & Rad. Therapy, Springfield, Ill.

54:437-540 (Nov.) 1945

*Roentgenographic Interpretation of Acute Hematogenous Osteomyelitis Treated with Penicillin. W. A. Altemeier and H. G. Reinecke.—p. 437.
Studies on Roentgen Death in Mice: Survival Time and Dosage. H. Quastler.—p. 449.
Studies on Roentgen Death in Mice: Body Weight and Sensitivity. H. Quastler.—p. 457.
Pneumoroentgenography with Oxygen in Diagnosis of Internal Derangements of Knee Joint. H. H. W. Brooke, W. C. MacKenzie and J. R. Smith.—p. 462.
*Miniature Chest Fluorography with Control Study. H. Hauser and C. C. Dundon.—p. 470.
*Milhary Carcinosis of Lungs Secondary to Primary Cancer of Gastrointestinal Tract. G. J. Culver.—p. 474.
Diaphragmatic Hernia and Dilated Esophageal Ampulla: Their Clinical and Diagnostic Significance. J. Abowitz.—p. 483.
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Roentgen Examination in Congenital Intestinal Obstructive Defects in Infants: Its Aid in Planning Suitable Surgical Approach and Procedures for Their Correction. A. K. Wilson.—p. 498.
So-Called Fifth and Sixth Cerebral Ventricle: Clinical and Roentgenographic Study and Case Report. S. J. Silbermann.—p. 503.
Benign Giant Cell Tumor of Spine: Report of Case Occurring in Cervical Spine. E. H. Brock and F. B. Bogart.—p. 512.
Hypertrophic Osteoarthropathy: Case Report. E. M. Kline.—p. 519.

Roentgenograms in Osteomyelitis Treated with Penicillin.—Fifty-two patients with acute hematogenous osteomyelitis were observed by Altemeier and Reinecke. At first many received less than 800,000 units of penicillin, usually with good results, but a total dose of 1,500,000 or more units administered over a period of three or more weeks has been found to be desirable. The penicillin was administered intravenously or intramuscularly in amounts of 15,000 to 25,000 units at intervals of three hours. All patients recovered except 1 with severe and neglected acute hematogenous osteomyelitis of the tibia with staphylococcic pneumonia and bacteremia who was moribund when admitted. The roentgenograms during the first four to ten days do not aid in the diagnosis of acute osteomyelitis. Later in the disease roentgenographic changes varied with the age of the patient, the severity of infection, the duration of infection before treatment with penicillin, the adequacy of therapy and the type of infecting bacteria.

Miniature Chest Fluorography.—Hauser and Dundon submit evidence of the accuracy of findings in 1,000 subjects examined by the 4 by 5 inch miniature method in comparison with the standard 14 by 17 inch film. An x-ray unit was installed in the Department of Roentgenology at the University Hospitals of Cleveland to reduce the cost entailed in examining the chests of employees who constitute an unselected, apparently healthy, adult group. The cost of the smaller film is about one-sixth that of the conventional size without consideration of the saving in processing. Miniature and large roentgenograms were simultaneously obtained on the first thousand asymptomatic subjects examined. Precision in technic in miniature fluorography and experience in the interpretation of miniature films are necessary for the highest degree of accuracy. Twenty-four minimal pulmonary tuberculous lesions were detected in 1,000 examinations. Four errors were made in the first interpretation of the miniature films. Only one error was recorded on review of both sizes of films.

Miliary Carcinosis of Lungs Secondary to Primary Gastrointestinal Cancer.—Culver presents 4 cases of miliary carcinosis of the lungs from gastrointestinal cancer and traces the pathogenesis of the pulmonary lesions. In the chest roentgenogram the lesions are evenly and diffusely distributed throughout both lung fields such as would be expected with a hematogenous spread through the pulmonary circulation. The various lesions are not of homogeneous density but appear as soft mottled areas with fuzzy, poorly defined margins. Miliary tuberculosis and silicosis must be considered in the differential diagnosis. The lack of physical findings in spite of a severe pulmonary involvement is emphasized.

Annals of Surgery, Philadelphia

122:905-1160 (Dec.) 1945. **Partial Index**

*Use of Blood Plasma for Filling Pleural Space Following Total Pneumonectomy: Clinical Study. W. E. Adams, T. F. Thornton Jr. and L. M. Carlton Jr.—p. 905.
Chronic Leptomeningeal Thickening Following Treatment of Meningitis with Sulfa Drugs. P. Bailey.—p. 917.
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Transthoracic Esophagogastrostomy for Benign Strictures of Lower Esophagus. D. E. Clark and W. E. Adams.—p. 942.
*Use of Penicillin in Treatment of Acute Hematogenous Osteomyelitis in Children: Report of 12 Consecutive Cases. E. L. Compere, W. J. Schnute and L. M. Cattell.—p. 954.
Blood Iodine Studies: Relation of Basal Metabolic Rate to Blood Iodine in Thyroid Disease. G. M. Curtis and M. B. Fertman.—p. 963.
*Vagotomy for Gastroduodenal Ulcer. L. R. Dragstedt.—p. 973.
Blood Pressure of Renal and of Early and Late Neurogenic Hypertension Dogs After Low Cervical Cord Section. K. S. Grimson.—p. 990.
Cutis Grafts: Clinical and Experimental Studies on Their Use as Reinforcing Patch in Repair of Large Ventral and Incisional Hernias. H. N. Harkins.—p. 996.
Pathogenesis of Localized Fibrous Lesions in Metaphyses of Long Bones. C. H. Hatcher.—p. 1016.
Bilateral Adrenalectomy in Prostatic Cancer: Clinical Features and Urinary Excretion of 17-Ketosteroids and Estrogen. C. Huggins and W. W. Scott.—p. 1031.
Subtotal Replacement of Skin of Face for Actinodermatitis Due to Roentgenotherapy with Multiple Areas of Squamous Cell Carcinoma. H. P. Jenkins.—p. 1042.
Congenital Cataracts Following Rubella in Pregnancy. A. C. Krause.—p. 1049.
Headaches from Lesions of Scalp Nerves. F. E. Kredel.—p. 1056.
Osteomyelitis of Petrous Pyramid of Temporal Bone. J. R. Lindsay.—p. 1060.
Present Status of Ethylene-Oxygen Anesthesia. H. M. Livingstone.—p. 1071.
Resection of Left Lobe of Liver in Patient with Four Separate Carcinomas. J. van Prohaska.—p. 1092.

Blood Plasma for Filling the Pleural Space Following Pneumonectomy.—According to Adams and his associates, chief objections to pneumonectomy without thoracoplasty have been the hazard of serious infection of the pleural space and mediastinum, ill effects produced by overexpansion of the remaining lung and lowering of the blood plasma protein and tissue protein reserve, which is partly due to the filling of the pleural space with fluid rich in proteins. The results of the control experiments on animals revealed that the total blood proteins were reduced by as much as 25 to 30 per cent of their preoperative value. Replacement therapy in the form of blood or serum given intravenously, or serum intrapleurally, was quite effective in reducing the blood protein fall after pulmonary resection. Both methods of administration appeared to be effective. Blood protein determinations made by the micro-Kjeldahl method and hematocrit values were obtained before and at two day intervals for a ten to fourteen day period after thirty-two major operations, including fourteen lobectomies, five pneumonectomies, seven exploratory thoracotomies and six miscellaneous operations. The authors tested the influence of filling the pleural space with plasma following total pneumonectomy in man. They report results obtained on 18 patients receiving such treatment and on 10 additional patients used as controls without use of plasma. The incidence of complications following operation, including empyema, bronchial fistula, bronchitis, atelectasis and pneumonia, was much less in the group of patients whose pleural space was filled with plasma, being approximately 50 per cent of that of the control group.

Penicillin in Acute Hematogenous Osteomyelitis in Children.—Compere and his associates report 12 cases of acute hematogenous osteomyelitis controlled by penicillin or by a combination of penicillin and sulfonamides. Surgery was necessary in 4: in 1 for the removal of a small sequestrum and in 3 for the drainage of an abscess after the acute infection had subsided. Penicillin appears to be more effective in acute hematogenous osteomyelitis than any other therapeutic agent. Early use of penicillin in adequate doses administered at frequent intervals may not only cure the initial infection but prevent spread to other bones and in a majority of cases makes surgery unnecessary. If the penicillin is not started until after a bone has been extensively damaged, late surgery may become necessary. After the temperature begins to subside, the size of each dose of penicillin may be reduced; but the frequency of dosage must be maintained. When the patient becomes afebrile the dosage may be reduced gradually and discontinued after five days of normal temperature. Recurrences may occur if penicillin is stopped too soon. In several cases there was a small, secondary temperature rise after the penicillin was stopped. It is important not to neglect well established principles of medical care, such as the maintenance of the fluid balance of the body through the administration of isotonic solution of sodium chloride, dextrose, plasma or blood. Splints, plaster encasements or traction should be used when they are needed for supporting the diseased bone or to prevent contractures.

Vagotomy for Gastroduodenal Ulcer.—Dragstedt says that the chief secretory abnormality in ulcer patients is the secretion of abnormally large amounts of gastric juice in the intervals between meals, particularly at night when the stomach is empty. Evidence has been obtained which suggests that hypersecretion of gastric juice by ulcer patients is neurogenic in origin. Animal experiments had revealed that section of the vagus nerves to the stomach greatly reduced the secretion of gastric juice. Vagus section has been performed on 39 patients. The vagus nerves of the stomach were divided in 30 patients with duodenal, in 2 with gastric and in 7 with gastrojejunal ulcers. A striking and persistent relief of ulcer distress has been almost uniformly secured, with gain in weight and x-ray evidence of healing of the lesions. Section of the vagus nerves had no effect on the secretory response of the stomach to histamine or caffeine but abolished the response to insulin hypoglycemia and a sham meal. The tonus and motility of the stomach were decreased but not abolished.

Archives of Neurology and Psychiatry, Chicago

54:319-456 (Nov.-Dec.) 1945

Anticonvulsant Activity of Sulfoxides and Sulfones. H. H. Merritt, T. J. Putnam and W. G. Bywater.—p. 319.
Polyopia and Monocular Diplopia of Cerebral Origin. M. B. Bender. —p. 323.
Human Pyramidal Tract: Study of Pyramids in Cases of Acute and Chronic Vascular Lesions of Brain. A. M. Lassek.—p. 339.
Bilateral Intracranial Section of Glossopharyngeal Nerve: Report of Case. H. Wycis.—p. 344.
*Multiple Sclerosis with Late Onset of Symptoms. A. P. Friedman and C. Davison.—p. 348.
Ependymitis and Meningitis Due to Candida (Monilia) Albicans: Report of Fatal Case of Meningitis, with Comment on Its Clinical, Bacteriologic and Pathologic Aspects. A. A. Morris, G. G. Kalz and E. S. Lotspeich.—p. 361.
Narcolepsy: Combat Experience of Soldier with Narcolepsy. H. D. Fabing.—p. 367.
Psychopharmacologic Study of Schizophrenia and Depressions: Comparison of Tolerance to Sodium Amytal and Amphetamine Sulfate. J. S. Gottlieb, H. Krouse and A. W. Freidinger.—p. 372.
Localizing Value of Vertical Nystagmus. F. H. O'Brien and M. B. Bender.—p. 378.
Emotional Trauma Resulting from Illegitimate Birth. N. Fodor.—p. 381.
Experimental Evidence of Physiologic Mechanism of Certain Types of Headache. A. P. Friedman, C. Brenner and H. H. Merritt.—p. 385.
Unilateral Internal Ophthalmoplegia: Sole Clinical Sign in Patient with Syphilitic Meningitis. M. A. Zeligs and G. F. Joseph.—p. 389.
Action of Acetylcholine on Motor Cortex: Correlation of Effects of Acetylcholine and Epilepsy. F. M. Forster.—p. 391.
*Changes in Cerebral Veins in Hypertensive Brain Disease and Their Relation to Cerebral Hemorrhage: Clinical Pathologic Study. I. M. Scheinker.—p. 395.
Psychologic Studies on Patient Who Received Two Hundred and Forty-Eight Shock Treatments. J. Perlson.—p. 409.

Late Onset of Symptoms in Multiple Sclerosis.—Friedman and Davison found that in 310 patients with multiple sclerosis admitted to the Montefiore Hospital the onset of symptoms after the age of 40 occurred in 41 (13 per cent). Of 42 patients with multiple sclerosis on whom autopsy studies were made at this hospital, the disease began in 9 (21 per cent) during or after the fifth decade of life. The case histories of these 9 patients were investigated in order to determine whether the symptoms and clinical course of the patients with a late onset of symptoms differs from that of patients with an onset early in life. The diagnostic criteria of multiple sclerosis in the later years of life differ from those of the younger age group by showing a tendency to a progressive course, clearer evidence of intellectual deterioration and less evidence of dissemination of lesions.

Changes in Cerebral Veins in Hypertension.—Scheinker studied 65 typical cases of hypertension associated with massive cerebral hemorrhage. In most of these cases two types of lesions were observed: (1) reversible changes, manifested by venous congestion and stasis, resulting in tremendous distention, and (2) structural alterations of the vessel wall, characterized by an extreme degree of atrophy and advanced signs of degeneration and necrosis. Attention is directed to the predominantly venous origin of cerebral hemorrhage, which is considered as a terminal phase in a sequence of events which begin with reversible vascular disturbances. In a later stage structural alteration of the cerebral veins occurs, and terminal degeneration and necrosis of the vessel wall are present. In the presence of far advanced venular atrophy, elevation of venous pressure would appear to be an essential precursor to the massive escape of blood.

Archives of Pathology, Chicago

40:289-420 (Nov.-Dec.) 1945

Effects of Varying Degrees of Hypophysectomy in Dog. A. D. Keller, W. E. Lawrence and Claudia B. Blair.—p. 289.
Relationship of Boeck's Sarcoid and Tuberculosis: Report of Case in Which Tuberculosis of Lymph Nodes Was Associated with Features Highly Suggestive of Sarcoid. J. R. Dorgeloh and P. W. Tully. —p. 309.
Diverticula (Luschka's Crypts) of Gallbladder. H. E. Robertson and W. J. Ferguson.—p. 312.
Histologic Changes in Ovary and Uterus of Live Dirofilaria Immitis Recovered from Dogs Treated with Trivalent Antimony Compounds. L. L. Ashburn, T. L. Perrin, F. J. Brady and A. H. Lawton.—p. 334.
Renal Insufficiency Associated with Lymphopenia and Atrophy of Lymphatic Tissue in Man. R. L. Holman.—p. 340.
Duplication of Vermiform Appendix, Large Intestine and Urinary Bladder: Report of Case. M. L. Menten and Helen E. Denny. —p. 345.
Cancer in Relation to Usages: Three New Types in India. V. R. Khanolkar and B. Suryabai.—p. 351.
Experimental Nephropathies: V. Comparison of Toxic Action of Uranium, Mercury and Chromium on Kidneys. J. P. Simonds and Opal E. Hepler.—p. 362.
*Bone Marrow in "Folic Acid" Deficiency and Its Response to Crystalline Lactobacillus Casei Factor ("Folic Acid"). K. M. Endicott, F. S. Daft and Maurine Ott.—p. 364.
Experimental Atherosclerosis: Effect of Feeding Olive Oil on Absorption and Deposition of Cholesterol. S. Member and M. Bruger.—p. 373.
*Loeffler's Syndrome: Report of Case, with Pathologic Examination of Lungs. E. C. Bayley, D. O. N. Lindberg and A. H. Baggenstoss. —p. 376.

Bone Marrow and Folic Acid Deficiency.—Endicott and his associates found that leukopenia, granulocytopenia and, less frequently, anemia develop in rats given succinylsulfathiazole in purified diets, and that the Lactobacillus casei factor (folic acid, or vitamin B_c) corrects or prevents these dyscrasias. The involved marrow is hypocellular and shows general depletion, especially of the myeloid series. The erythroid series is usually depleted even though anemia may not be found. The response of the marrow to folic acid is a rapid regeneration with spectacular myeloid proliferation. When anemia is also present the erythroid series becomes hyperplastic and later is crowded out by myeloid hyperplasia. The marrow returns to normal after temporary overcompensation. From the pathologist's point of view the chief importance of experimental granulocytopenia and agranulocytosis and anemia of this type lies in its unique adaptability to research.

Loeffler Syndrome.—Bayley and his associates report the results of the postmortem examination of a woman aged 59 who died of Loeffler's syndrome. The examination was limited to the study of the lung. The bronchial lesions were similar to those observed in bronchial asthma. The predominantly eosinophilic exudate infiltrating all portions of the wall, the hyalinization and thickening of the basement membrane of the epithelium and the presence of large quantities of mucus in

the cells and lumens were all typical of bronchial asthma. The advanced organization of the pneumonic exudate and the granulomatous character of the focal lesions constitute overwhelming evidence that the pulmonary lesions are not "transitory" in all cases. The most striking vascular change was that of necrotizing arteritis and arteriolitis, which histologically appeared quite similar to the change observed in periarteritis nodosa. It also suggests that there is an underlying allergic basis in Loeffler's syndrome.

Bulletin of Johns Hopkins Hospital, Baltimore

77:345-410 (Nov.) 1945

Epivascular Choroidal Pigment Streaks, Their Pathology and Possible Prognostic Significance. R. O. Scholz.—p. 345.
Significance of Streptococci Isolated from Female Urinary Tract. I. G. Schaub and J. E. Davis.—p. 372.
Clinical and Electrocardiographic Response to N-Methylnicotinamide Chloride Administration in Man. G. A. Vance.—p. 393.
Lipid Response to Vitamin A Administration: Possible Test for Vitamin A Deficiency. H. W. Josephs.—p. 402.

Canadian Journal of Public Health, Toronto

36:455-486 (Dec.) 1945

Mapping Our Frontiers of Health. B. Claxton.—p. 455.
Educating Food Handlers. R. G. Knipe and M. J. Harper.—p. 465.
Moral and Social Aspects of Venereal Disease Control. C. E. Silcox.—p. 472.
Method for Rapid Production of Citrinin. J. Wyllie.—p. 477.

Connecticut State Medical Journal, Hartford

10:1-92 (Jan.) 1946

"Timeo Danaos Dona Ferentes" (National Health Program). R. I. Lee.—p. 3.
National Health Program. M. Fishbein.—p. 5.
Practical Facts About Salmonella Infections. E. K. Borman.—p. 16.
Expansion of Connecticut Cancer Program. M. H. Griswold.—p. 18.
Duplication Cyst of Terminal Ileum with Acute Inflammatory Reaction: Report of Case. K. T. Phillips.—p. 21.
Adenocarcinoma of Jejunum Arising Around Polyps. G. P. Cheney and C. M. Mezey.—p. 23.
Vitamin D Poisoning: Hypercalcemia—Case Report. I. W. Kingsbury.—p. 25.
Plan to Augment Graduate Medical Training. H. Thoms.—p. 26.
Provision of Better Medical Care. J. A. Curran.—p. 28.

Florida Medical Association Journal, Jacksonville

32:337-396 (Jan.) 1946

*Dicumarol Therapy in Acute Coronary Thrombosis: Results in Fifty Attacks, with Review of Data on Embolic Complications and Immediate Mortality in Myocardial Infarction. E. S. Nichol and S. W. Page Jr.—p. 365.
Rehabilitation of War Worn Civilian. W. C. McConnell.—p. 371.
Loeffler's Syndrome. M. S. Saslaw and J. A. Bowman.—p. 373.

Dicumarol in Acute Coronary Thrombosis.—Nichol and Page used dicumarol in 50 consecutive episodes of acute coronary thrombosis with myocardial infarction occurring in 44 patients. All except 2 were hospitalized. A history of previous myocardial infarction was noted 20 times, 2 previous attacks occurring in 4 cases. Eight patients treated with dicumarol died within six weeks of the onset of acute coronary thrombosis. All of the 26 patients who were treated in their first attack survived. Six necropsies did not reveal mural thrombi or systemic or pulmonic embolic phenomena. Only in 1 case was there clinical evidence of pulmonary embolism, and in this case the dose was ineffective. Dicumarol, a safe drug if used intelligently, probably decreases the immediate mortality rate in acute coronary thrombosis. It appears to prevent pulmonary and systemic vascular embolization and thrombosis if used in an adequate amount.

Hawaii Medical Journal, Honolulu

5:69-98 (Nov.-Dec.) 1945

Mumu: A Few Facts About Filariasis for Folks Who Fear That Filaria Infected Fellows Will Fetch Filariae from Front. R. N. Babione.—p. 69.
Congenital Anomalies of Coronary Arteries. H. J. Frachtman.—p. 72.
Gastrojejunal Ulcer as Related to Gastroenterostomy. J. E. Strode.—p. 76.
Bronchiectasis. F. Raine.—p. 78.
Diagnosis and Treatment of Lung Abscess and Acute Empyema. G. Finney.—p. 82.
Hemorrhage from Meckel's Diverticulum in Infancy: Report of Case. W. B. Patterson.—p. 85.

Journal Industrial Hygiene & Toxicology, Baltimore

27:239-274 (Nov.) 1945

Studies of Effects of Ammonium Picrate on Man and Certain Experimental Animals. F. W. Sunderman, F. D. Weidman and O. V. Patson.—p. 241.
Observations on Fujiwara Reaction as Test for Chlorinated Hydrocarbons. F. J. Webb, K. K. Kay and W. E. Nichol.—p. 249.
Animal Studies on Toxicity of Inhaled Antimony Trioxide. C. U. Dernehl, C. A. Nau and H. H. Sweets.—p. 256.
Observations on Effects of Gamma-Valerolactone on Experimental Animals. W. B. Deichmann, R. Hirose and S. Witherup.—p. 263.
Calcium Cyanide Solutions as Constant Sources of Hydrogen Cyanide Gas for Animal Experiments. W. A. Robbie and P. J. Leinfelder.—p. 269.

Journal of Nervous and Mental Disease, New York

102:537-650 (Dec.) 1945

*Pituitary Adenoma Associated with Chronic Duodenal Ulcer. J. E. Pisetsky.—p. 537.
Reflex Differences in Hypoglycemic Schizophrenics, with Few Remarks on Possible Role of Right Hemisphere in Production of Some "Mental" Symptoms. H. H. Fleischhacker.—p. 547.
Psychiatric Evaluation of Naval Personnel Returning from Combat and Overseas Duty. J. B. Dynes and N. N. Springer.—p. 564.
Significance of Depth of Physiologic Cup of Optic Disk for Mental Ability. M. Ostow.—p. 571.
Diagnosis and Classification of Neurotic States: Reinterpretation of Eysenck's Factors. R. B. Cattell.—p. 576.
Combat Induced Anxiety State as Seen After Return to Duty. P. Chodoff.—p. 590.
Aminoacetic Acid (Glycine) in Treatment of Depression. M. H. Weinberg.—p. 601.

Pituitary Adenoma and Chronic Duodenal Ulcer.—Pisetsky reports a case of pituitary adenoma and visual disturbances dating back twenty-four years, associated with a chronic duodenal ulcer for more than eight years. Since irradiation of the tumor six years before, with the exception of occasional gastric complaints, the symptoms subsided. Disturbances in impulse formation in the cortex and hypothalamus as a result of pressure produced by the tumor result in increased gastric peristalsis, hypersecretion and vasoconstriction, which produce ischemia and then erosions, ulcerations or perforation of the stomach wall.

J. Neuropathology & Exper. Neurology, Baltimore

4:305-412 (Oct.) 1941

Pathology of Injury to Nerve Induced by Cold. D. Denny-Brown, R. D. Adams, C. Brenner and Margaret M. Doherty.—p. 305.
Degeneration of Basal Ganglia in Monkeys from Chronic Carbon Disulfide Poisoning. R. Richter.—p. 324.
Toxic Productive Encephalitis: Pathologic Study. G. B. Hassin.—p. 354.
Blood Vessel Hyperplasia Masking Glioblastoma Multiforme: Report of Case. C. V. Z. Hawn and F. D. Ingraham.—p. 364.
Intrasellar Meningioma and Multiple Cerebral Glioblastomas. W. R. Kirschbaum.—p. 370.
Cerebellar Atrophy: I. Analysis of Various Forms and Analytical Scheme for Their Study. B. W. Lichtenstein.—p. 379.
Hemosiderin and Tissue Iron in Brain, Its Relationship, Occurrence and Importance: Study on 93 Human Brains. G. Strassmann.—p. 393.
Occurrence and Distribution of Acid Fast Pigment in Central Nervous System. A. Wolf and A. M. Pappenheimer.—p. 402.

Journal of Nutrition, Philadelphia

30:395-504 (Dec.) 1945

Nicotinic Acid and Level of Protein Intake in Nutrition of Pig. M. M. Wintrobe, H. J. Stein, R. H. Follis Jr. and S. Humphreys.—p. 395.
Therapeutic Effect of Yeast and Pyridoxine on Poikilocytosis in Dairy Cattle. J. T. Reid, C. F. Huffman and C. W. Duncan.—p. 413.
Field Illumination and Commercial Handling as Factors in Determining Ascorbic Acid Content of Tomatoes Received at Cannery. G. F. Somers, K. C. Hamner and W. L. Nelson.—p. 425.
Effect of Manufacturing Methods on Ascorbic Acid Content and Consistency Characteristics of Tomato Juice. W. B. Robinson, E. Stotz and Z. I. Kertesz.—p. 435.
Elimination and Distribution of Selenium in Tissues in Experimental Selenium Poisoning. Irene Rosenfeld and O. A. Beath.—p. 443.
*Secretion of Vitamin D in Milks of Women Fed Fish Liver Oil. L. J. Polskin, B. Kramer and A. E. Sobel.—p. 451.
Vitamin A Requirements in Calves. J. M. Lewis and L. T. Wilson.—p. 467.
Influence of Ascorbic Acid on Activity of Gonadotropic Hormones in Guinea Pigs. J. T. Reid and J. F. Sykes.—p. 477.
Availability of Iron in Hawaiian Grown Vegetables. C. D. Miller and Lucille Louis.—p. 485.

Vitamin D in Milk of Women Fed Fish Liver Oil.—Polskin and his co-workers determined the vitamin D content of human milk following the ingestion of fish oils containing the antirachitic vitamin. Vitamin D in the form of mixed fish

liver oil was supplied in a single dose of 32,000 U. S. P. XI units by capsule at each weekly visit. A total of 59 patients were studied in all, 21 of whom served as controls and received no vitamin D supplement. The vitamin D level in the milks of 18 of the controls was inappreciable, ranging from traces to less than 10 international units per quart. Three women showed values of 17, 28 and 40 international units per quart. The average vitamin D content per quart of milk of mothers supplied during the latter half of pregnancy was 10 international units for 7 mothers given from 32,000 to 96,000 international units of supplement, 53 international units for 9 mothers given from 128,000 to 224,000 international units of supplement, 62 international units for 5 mothers given from 256,000 to 320,000 international units of supplement and 53 international units for 6 mothers given from 416,000 to 480,000 international units of supplement. Two mothers given a single dose of 32,000 international units during labor secreted milks from three to eight days later which bioassayed 91 and 216 international units per quart. Seven women given 40,000 international units of vitamin D daily from labor to about ten days later yielded milk the vitamin D content of which averaged 310 international units per quart. For the purpose of fortifying human milk with vitamin D for infant use, supplementation of the mother with fish liver oil during pregnancy is not a practical method. Vitamin D must be taken just prior to or during lactation in order to enrich the milk with the factor appreciably.

Journal of Pediatrics, St. Louis

27:505-628 (Dec.) 1945

*Penicillin Treatment of Pneumococcic Meningitis in Infants. Gretchen Hutchins and J. A. V. Davies.—p. 505.
*Prevention of Rheumatic Recurrences in Children by Use of Sulfathiazole and Sulfadiazine. R. E. Wolf, Louise W. Rauh, and R. A. Lyon.—p. 516.
Rickets: Study of Calcium and Phosphorus Metabolism and of Clinical Findings as Influenced by Certain Feedings. J. R. Gerstley, D. J. Cohn and Grace Lawrence.—p. 521.
Proctologic Problems of Pediatrician. E. F. Patton.—p. 532.
Heterophile Antibody Reaction in Infants and Children. J. Diamond and J. S. Sennott.—p. 540.
Sedatives and Stimulants in Pediatric Practice. H. Gold.—p. 546.
Chorea in Negro Race. W. A. Daniel Jr.—p. 554.
Tracheotomy in Bulbar Poliomyelitis. D. F. Glaser.—p. 560.
Cardiospasm in Newborn. P. P. Vinson.—p. 565.
Meningitis Caused by Type F Hemophilus Influenzae: Report of Case, with Recovery. J. G. Parke.—p. 567.
Treatment with Antiserum of Acute Laryngitis Caused by Hemophilus Influenzae. R. G. Jordan and J. R. Turner.—p. 572.
Meningococcic Meningitis: Report of Multiple Cases Occurring in Same Family. C. C. Rotondo and N. I. Handelman.—p. 576.
Cystic Tuberculosis of Bone in Case of Miliary Tuberculosis. R. J. Blattner and Chieh Sung.—p. 579.
Arachnodactyly—Unusual Complication Following Skull Injury. W. F. Schneider.—p. 583.
Treatment of Acute Suppurative Parotitis in Infants. E. B. D. Neuhauser and B. G. Ferris Jr.—p. 589.
Hereditary Skin Defect in Newborn Infant. P. Freud, A. W. Rhodes and A. Weisz.—p. 591.
Generalized Vaccinia and Probable Induced Thiamine Deficiency in Congenitally Hypothyroid Child. E. M. Gropper, C. Lamanna and C. A. Stewart.—p. 595.
Greenberg Modification of Flagg Laryngoscope—Its Use in Asphyxia Neonatorum. L. J. Greenberg.—p. 602.

Penicillin in Pneumococcic Meningitis in Infants.—Hutchins and Davies report 14 cases of pneumococcic meningitis in children under 2 years of age treated with penicillin. In 7 some form of sulfonamide had been administered at various intervals before hospitalization. A number of the children were given sulfadiazine during hospitalization either for complications or for reasons associated with meningitis. The earlier patients and smaller infants were given penicillin intramuscularly on a dosage schedule of 3,000 units every three hours. The other patients were given 5,000 units every three hours. The schedule of intrathecal therapy was 10,000 units twice a day (or three times a day for the first few days) in an aqueous or saline solution containing 1,000 units per cubic centimeter. When blocks occurred so that spinal fluid could not be obtained by the lumbar route, penicillin was given intracisternally when possible and intraventricularly in a few cases. Penicillin was administered by the intrathecal route for an average of eleven days. Recoveries, either intact or with residual damage to the brain, were significantly more frequent than with sulfonamides and type specific antiserum. Of 14 infants, 9 survived.

Prevention of Rheumatic Recurrences by Use of Sulfonamides.—Wolf and his associates state that a group of 70 children receiving sulfathiazole or sulfadiazine for a total of 81 patient seasons did not have recurrences of rheumatic fever during the periods of treatment. One child developed a recurrence during a summer season between courses, and another developed subacute bacterial endocarditis during the same period. A third child developed subacute bacterial endocarditis while being treated. Albuminuria occurred in 9 patients receiving sulfadiazine, which in 4 instances was so severe that the drug was withdrawn. Mild leukopenia occurred in 4 patients, 2 receiving sulfadiazine and 2 sulfathiazole, but the number of white cells quickly returned to normal when the drug was withdrawn for a few days. The prophylactic treatment with sulfonamides should be continued throughout the year. In many cases it would seem advisable to administer the drug continuously for several years.

Journal of Thoracic Surgery, St. Louis

14:415-502 (Dec.) 1945

*Traumatic Wet Lung: Observations on Certain Physiologic Fundamentals of Thoracic Trauma. T. H. Burford and B. Burbank.—p. 415.
Use and Control of Thoracic Surgical Teams of Auxiliary Surgical Group. J. H. Forsee.—p. 425.
Full Thickness Flap Closure of Large Thoracotomy Due to Chemical Destruction of Chest Wall. W. H. Prioleau.—p. 433.
Penicillin in Pulmonary Resection: Preliminary Report. A. R. Valle and L. White Jr.—p. 437.
Cylindroma of Bronchus: Report of 6 Cases. J. R. McDonald, H. J. Moersch and W. S. Tinney.—p. 445.
Spontaneous Pneumothoraces Occurring in Patients Undergoing Peroral Endoscopy. O. A. Abbott and H. R. de Oliveira.—p. 453.
Experimental Hemothorax. D. W. Melick and Maryloo Spooner.—p. 461.
Nerve Block in Treatment of Thoracic Injuries. L. J. Fitzpatrick and A. J. Adams.—p. 480.
*Recovery from Hemolytic Staphylococcus Aureus Bacteremia Attributed to Penicillin Therapy: Case Report. T. H. Burford, P. C. Samson, L. A. Brewer III and B. Burbank.—p. 483.
Aneurysm of Subclavian Artery in Infant: Report of Case. R. A. Daniel Jr.—p. 487.

Traumatic Wet Lung.—As members of thoracic surgical teams, Burford and Burbank treated 1,500 patients with thoracic trauma. They call attention to the fact that in wounds of the chest the lung tissue reacts to produce more than the normal amount of interstitial and intra-alveolar fluid. The bronchopulmonary tree has more fluid to remove but is less capable of doing so. The result of these two phenomena is what may be called the "wet lung" of trauma. Failure to take cognizance of this fact will frequently lead to death or to the establishment of chronic pulmonary invalidism. The patient with early wet lung is apprehensive. Dyspnea is present and is accompanied by paroxysms of a painful cough which is not effective in emptying the bronchopulmonary segments. There is restriction of motion of the involved side. The most striking feature is the presence of rales, which are bronchial in character and consist of wheezes and rhonchi. Therapy must control the production of moisture and promote adequate bronchial drainage. Pain, which interferes with an effective cough mechanism, must be combated. Adhesive strapping and the use of morphine are physiologically unsound and ineffectual. The authors have used procaine either at the site of injury, by intercostal nerve injection or by thoracic paravertebral sympathetic nerve block, with gratifying results. The cough becomes painless and effective. The patient will often pass from an alarming state to one of comparative comfort and safety within a few minutes. Some of these patients will require mechanical evacuation of the bronchial tree. Some will present evidence of persistent moisture after nerve block and aspiration. For these the administration of atropine may be of value.

Penicillin Therapy in Hemolytic Staphylococcus Aureus Bacteremia.—Five days after being wounded in the right chest, a man was found to have a serrated missile, measuring 3 by 4 cm., lying in the right pleural cavity, a moderate degree of pathologic change within the lungs and clotted hemothorax. During the subsequent five days the intrapulmonary lesions cleared to a considerable extent and a right postero-

lateral thoracotomy was done. The intrapleural foreign body was removed and the organizing clot evacuated. Seven days after operation the temperature rose and the patient complained of pain in the wound, which was somewhat indurated. On the following day hemolytic Staphylococcus aureus was found and subsequently suppuration appeared, which was drained. Later, when a blood culture revealed hemolytic Staph. aureus, treatment with sodium sulfathiazole was started, but infected emboli appeared in the extremities. Sulfathiazole therapy was stopped and treatment with penicillin was begun. Burford and his associates state that the response to penicillin was dramatic and conclusive. Of particular significance was the recrudescence of the infection with the temporary cessation of penicillin therapy and the prompt regression of signs and symptoms on the resumption of the agent.

Military Surgeon, Washington, D. C.

98:1-88 (Jan.) 1946

*Solid Blast Personnel Injury: Clinical Study. J. S. Barr, R. H. Draeger and W. W. Sager.—p. 1.
What Is Happening to Britain's Wounded Now? F. A. M. Webster. —p. 13.
Diagnosis of Migraine in Flying Personnel. D. B. Davis and J. W. Bick Jr.—p. 17.
Review of 18 Cases of Arthrotomy of Knee Joints. L. I. Thomas. —p. 20.
Local Prophylaxis for Gonorrhea: Improved Technic. E. Granet.—p. 25.
Rheumatic Fever-like Syndrome Caused by Microaerophilic Streptococcus, with Favorable Results on Penicillin Therapy: Report of Case. M. R. Moore and R. B. Hemphill.—p. 27.
Ladder Splint with Regulation Litter for Broken Back. C. D. Donahue and H. R. Allumbaugh.—p. 35.
Fractures in Electroshock Therapy as Related to Roentgenographic Spinal Findings. J. H. Huddleson and H. L. Gordon.—p. 38.
Hyperextension Back Brace for Treatment of Compression Fractures of Vertebrae. C. H. Bradford and W. C. Graham.—p. 40.
Significance of Salt (NaCl) in Torrid Temperatures. L. Rosenbaum. —p. 43.
Effect of Procaine on Inhibitory Factor of Penicillin. F. P. Hesser and M. Golland.—p. 47.
Suggestions in Eye Education. N. P. Popov.—p. 48.
Methods for Determination of *p*H and Salinity as Field Tests in Control of Anopheline Mosquitoes. S. Kaye.—p. 50.

Solid Blast Injury.—Barr and his associates studied 50 cases of solid blast injury of sufficient severity to require evacuation to naval hospitals in the United States. This injury is a definite clinical entity caused by the shock wave from an explosion transmitted through solid material, usually steel, to personnel in contact with this material. In the typical case there are fractures of the lower extremities, with extensive soft tissue damage. Fractures of the os calcis occurred in 15 instances. There were 15 fractures involving the astragalus, and in each case there were associated fractures of contiguous bones. Fractures of the distal tibia occurred in 20 instances, 10 of them compound. Injuries involving the ankle and the tarsal bones occurred in 18 of the 50 cases and are the most common and characteristic among the solid blast injuries. Fractures of the shaft of the tibia and fibula occurred 9 times (4 compound). Fractures of the upper end of the tibia involving the knee joint occurred 14 times (2 bilateral). Ten legs were amputated soon after injury because of gangrene subsequent to irreversible damage to the circulation. In 4 cases the amputation was bilateral. In the majority of these cases the popliteal artery had been torn by dislocation of the knee joint, with or without fracture. These patients all received satisfactory first aid treatment. Proper early surgical management and late reconstructive procedures will restore the majority of the limbs to useful function.

New England Journal of Medicine, Boston

233:799-832 (Dec. 27) 1945

Primary Anastomosis in Carcinoma of Colon. H. M. Clute and F. R. Kenney.—p. 799.
Thiouracil as Cause of Neutropenia and Agranulocytosis. M. F. Lesses and S. L. Gargill.—p. 803.
Clinical Significance of Data Accumulated in Medical Care of Young Women. H. L. Hardy.—p. 811.
Menstruation, Its Disorders and Their Treatment. J. Rock.—p. 817.
Subacute and Chronic Glomerulonephritis Developing in Congenital Polycystic Kidneys.—p. 824.
Acute Pancreatitis, with Fat Necrosis.—p. 826.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Australian and New Zealand J. Surgery, Sydney

15:1-72 (July) 1945

The University and the Medical Profession. J. D. G. Medley.—p. 3.
Carcinoma of Rectum, with Special Reference to Sphincteric Control. J. A. Jenkins.—p. 15.
Traumatic Injuries of Peripheral Nerves: Analysis of Incidence in 301 Consecutive Cases of Peripheral Nerve Injuries. S. Sunderland. —p. 25.
Slowness and Failure of Bony Union After Fractures and Osteotomies of Proximal or Trochanteric End of Femur. T. King.—p. 33.

Brain, London

68:79-166 (June) 1945

Transient Disturbances Following Gunshot Wounds of Head. W. R. Russell.—p. 79.
Study of Pupillary Inequalities in Man. E. A. Turner.—p. 98.
Adipose Tissue of Peripheral Nerves. S. Sunderland.—p. 118.
Abnormal Suppression of Cortical Frequencies. D. Williams and Joan Reynell.—p. 123.
Spinal Tracts Subserving Micturition in Case of Erb's Spinal Paralysis. J. McMichael.—p. 162.

British Heart Journal, London

7:161-220 (Oct.) 1945

*Mercurial Diuretics: Intolerance as Shown by Skin Sensitivity. A. Burrows and W. Stokes.—p. 161.
*Effects of Emetine on the Heart. J. D. Cottrell and G. W. Hayward. —p. 168.
*The Carotid Shudder. W. Evans and D. Lewes.—p. 171.
Quantitative Electrocardiographic Method. H. E. S. Pearson and L. M. Gerlis.—p. 173.
Case of Myxoma of the Heart. W. Burnett and Jane I. Davidson. —p. 180.
Paroxysmal Tachycardia and 2:1 Heart Block. M. Campbell.—p. 183.
*Immersion as a Factor in Development of Hypertension. O. Garai. —p. 200.

Intolerance to Mercurial Diuretics.—Burrows and Stokes report 9 cases of skin reactions to mercurial diuretics, in 1 of which a severe reaction was accompanied by manifestations of an acute nephritic nature and by stomatitis. The other 8 in which mercurial diuretics were administered gave only the skin signs. Sensitization, idiosyncrasy or allergy may be of different degrees. Skin rashes and itching without other complications seem to indicate moderate sensitivity. There appears to be a threshold concentration of mercury in the blood above which signs of allergy develop, and this may vary with the individual patient. An injection of a mercurial diuretic did not cause a rash when a patch test immediately preceding it was negative. Accordingly this test should be useful when accumulation of the drug is suspected or when continuation of treatment is desirable after cutaneous sensitization. Sensitivity, as shown by patch testing, may be lost after a brief period of rest from the drug. Cutaneous sensitization to mercury need therefore not contraindicate the subsequent employment of these diuretics in adjusted dosage after a short interval.

Effects of Emetine on the Heart.—Cottrell and Hayward found that diminution or inversion of the T waves occurred in one or more leads in 25 out of 32 cases of amebiasis in which emetine was employed. In 12 cases there was an increase in the PR interval of from 0.02 to 0.04 second. Similar changes occurred during treatment with bismuth iodide, 7 out of 8 cases showing diminution in T waves and prolongation of the PR interval. The cardiogram returned to normal from eight to twelve days after the completion of treatment. The effect on the blood pressure and pulse rate of both drugs was insignificant, and there was no clinical evidence of myocardial insufficiency.

The Carotid Shudder.—In 9 patients in whom subsequent clinical, cardiographic and cardioscopic examination established the presence of aortic stenosis and incompetence Evans and Lewes observed a characteristic sign which permitted a diagnosis of the combined aortic lesion from inspection of the neck. At the height of the carotid pulse, large on account of aortic incompetence, they noticed a quiver or vibration which lasted for only a moment. This effect they have named the "carotid shudder." Only a proportion of patients with combined aortic stenosis and aortic incompetence exhibit carotid shudder, but

the fact that they were able to observe 9 such cases in eighteen months emphasizes its common occurrence. The clinical sign was not present in patients in whom aortic incompetence or aortic stenosis existed separately.

Immersion as Factor in Hypertension.—Garai studied a group of 15 physically fit men of the merchant navy, all of whom had been shipwrecked and exposed to cold and immersion. To act as controls, a group of nonimmersed neurotic men and a group of nonimmersed non-neurotic men were also tested in the same manner. The response of shipwrecked men to a standard "cold pressor test" (immersion of the hand in ice water and determination of blood pressure changes) was different from that of the two control groups, who had not been exposed to wet and cold. The author concludes that this tends to support the hypothesis that exposure if severe and prolonged can have a damaging effect on the normal kidney.

British Journal of Radiology, London

19:1-44 (Jan.) 1946

Anatomy of Blood Vessels of Human Lung as Applied to Chest Radiology. T. Lodge.—p. 1.
Energy Absorption in Radium Therapy. F. Bush.—p. 14.
Recent Advances in Investigation of Small Intestine. W. Tennent. —p. 22.
Feed-Back Amplifier for Ionization Currents. F. T. Farmer.—p. 27.
External and Internal Thorium X Therapy. K. F. Nagelschmidt.—p. 31.
Review of Recent French Literature on Radiotherapy. H. C. Simchowitz.—p. 36.
Effect of X-Rays on Leishmania Tropica in Vitro. B. Feldman-Muhsam and L. Halberstaedter.—p. 41.

British Medical Journal, London

2:873-910 (Dec. 22) 1945

Estimation of Serum Proteins by Linderström-Lang Gradient. H. Hoch and J. Marrack.—p. 876.
Liver Function in Infective Hepatitis Gaged by Hippuric Acid Synthesis Tests. M. R. Pollock.—p. 878.
Management of Recent Fracture Dislocation of Cervical Spine. A. N. Guthkelch.—p. 880.
Therapeutic Efficiency of Ultraviolet Light Apparatus. B. C. Elliott. —p. 881.
Anti-M Isoagglutinins in Human Serum. Marjory N. McFarlane. —p. 883.

2:911-952 (Dec. 29) 1945

Medicine and the State, with Special Reference to Emergency Medical Service. W. Elliot.—p. 911.
*Relation Between Congenital Obliteration of Bile Ducts and Icterus Gravis Neonatorum. M. O. Skelton and G. H. Tovey.—p. 914.
*The Rh Factor and Blood Transfusion: Observations on Group of Rh Negative Individuals Transfused with Rh Positive Blood. W. C. Moloney.—p. 916.
Asymptomatic Kala-Azar in Soldiers from Over Seas. T. G. Armstrong. —p. 918.
Four Cases of Russell's Viper Bite. P. H. Wyon.—p. 919.
Blindness Following Hematemesis. J. Black.—p. 920.

Congenital Obliteration of Bile Ducts and Icterus Gravis Neonatorum.—During the past three years Skelton and Tovey have observed several cases of hemolytic disease of the newborn in which there have been either clinical signs simulating congenital obliteration of the bile ducts or a history of this condition in other members of the family. They conclude that certain cases of so-called congenital obliteration of the bile ducts occur as sequels of icterus gravis neonatorum.

Rh Negative Patients Transfused with Positive Blood.—Moloney reports Rh studies on 138 wounded American soldiers transfused with whole blood at the 163d General Hospital. Of this group 18 were found to be Rh negative; they were investigated for the presence of Rh antibodies and also in regard to the survival of Rh positive cells in the circulation. There was evidence of abnormally rapid elimination of transfused Rh positive red cells from the circulation of some Rh negative recipients. While demonstrable antibodies were found in only 1 case, it is quite possible that isoimmunization and latent sensitization occurred in others of this group. The mechanism of rapid loss of Rh positive red cells from Rh negative recipients is obscure. Various extrinsic factors may have influenced this phenomenon, or some undetected antibody may play a part in this hemolytic process. The possibility that an activated reticuloendothelial system (or other cellular agency) may be involved in the rapid elimination of Rh positive cells deserves further study. From the practical standpoint, Rh negative persons should be transfused with Rh negative blood. While Rh isoimmunization may present few serious immediate reactions, the possibility of Rh sensitization should be avoided.

1:1-38 (Jan. 5) 1946

Surgery of Arterial Disease and Injury. J. P. Ross.—p. 1.
Observations on Cases of Starvation at Belsen. P. L. Mollison.—p. 4.
*D. B. E.: New Synthetic Estrogen. R. Greene.—p. 9.
D. B. E. in Treatment of Menopausal Symptoms. S. Way.—p. 10.
Concentrating Malaria Parasites in Thin Films. K. B. Rogers.—p. 11.

New Synthetic Estrogen.—The new synthetic estrogen discussed by Greene and designated as D. B. E. is the proestrogen α α-di-(p-ethoxyphenyl)-β-phenyl bromoethylene. It differs from estradiol and stilbestrol in that a small increase in the dose produces a great prolongation of action. It appears, therefore, that D. B. E. is stored in the body and slowly released. Greene investigated the efficacy of this substance in menopausal women, in men with carcinoma of the prostate and in patients with uterine atrophy. The only advantage of the drug seems to be its prolonged action. In some respects it is inferior to the other synthetic estrogens, and the author doubts that the advantage of weekly over more frequent administration of other estrogens is sufficient to warrant the general introduction of the new estrogen.

Lancet, London

2:801-836 (Dec. 22) 1945

Psychiatric Lessons from Active Service. G. W. B. James.—p. 801.
*Comparative Effect of Sulfonamide and Penicillin in Pneumonia. T. Anderson and Margaret S. Ferguson.—p. 805.
Mass Radiography. J. F. Brailsford.—p. 808.
Inguinal Hernia: New Muscular Internal Ring. W. J. M. Brandon. —p. 812.
Thoughts on Sprue After Experience in India. A. W. D. Leishman. —p. 813.
Infusion into Internal Saphenous Vein at Ankle. J. H. Kirkham. —p. 815.
Aseptic Necrosis at Sites of Continuous Intramuscular Penicillin Infusions. A. Nelson-Jones and G. E. O. Williams.—p. 817.

Comparative Effect of Sulfonamide and Penicillin in Pneumonia.—A series of 126 patients over the age of 35 who had pneumonia were divided into two groups, one receiving sulfathiazole and the other penicillin. All patients received the same symptomatic treatment and general clinical control. Each method achieved fairly similar results. Anderson and Ferguson think that properly controlled sulfonamide treatment for the average case should not be discarded and suggest that penicillin should be used for selected patients, usually in combination with a sulfonamide. A poor cardiovascular system is an indication for combined therapy. Extensive pulmonary involvement, severe cyanosis and dyspnea are other indications which may call for the support of chemotherapy with penicillin.

2:837-868 (Dec. 29) 1945

Speech and Handedness. W. R. Brain.—p. 837.
Symptoms of Early Pulmonary Tuberculosis. H. J. Trenchard.—p. 842.
*Penicillin Treatment of Serous Cavity Infections. I. W. J. McAdam, S. W. Challinor, J. P. Duguid and A. McCall.—p. 843.
Varicose Veins: Precipitation Method of Treatment. W. Thompson. —p. 849.
Injuries of Menisci: Diagnosis by Manipulation of Knee Joint. D. Brown.—p. 849.
Target Cell Anemia: Two Cases in Bucharan Jews. C. Schieber. —p. 851.

Penicillin in Serous Cavity Infections.—McAdam and his associates determined the levels of penicillin in the various body fluids following penicillin administration by different routes and different methods. The fluids examined included blood serum, pleural, pericardial, peritoneal, synovial and cerebrospinal fluids and pus from abscess cavities. The penicillin content of the fluids was approximately evaluated from a consideration of the dilution of the fluid which completely inhibited the growth of the standard staphylococcus. It was found that, provided the dosage is sufficiently high, systemic administration of penicillin produces adequate bacteriostatic levels in the exudates of infected body cavities, infected cerebrospinal fluid and abscess pus. The dosage of penicillin required to obtain an adequate bacteriostatic level in these exudates appears to be somewhat higher than that necessary for adequate serum bacteriostasis. Penicillin administered locally cannot be relied on to reach all sites of infection because of the pronounced tendency for locula-

tion to occur in infections of serous cavities. Local administration of penicillin is therefore not a substitute for systemic administration, but it may be of some advantage because of the high bacteriostatic levels produced in the exudates. After local administration of penicillin into the peritoneum, a joint and the cerebrospinal fluid, the authors have obtained adequate bacteriostatic levels in the serum for from eight to eighteen hours.

Medical Journal of Australia, Sydney

2:353-384 (Dec. 1) 1945

*Patent Ductus Arteriosus. B. Shallard.—p. 353.
Surgical Treatment of Patent Ductus Arteriosus. B. T. Edye.—p. 362.
Anesthesia in Cases of Ligation of Patent Ductus Arteriosus. C. N. Paton.—p. 362.
Hypersensitivity to Horse Serum. P. W. Farmer.—p. 363.
Report of Treatment of 7 Cases of Granuloma Venereum with Penicillin. F. B. Turner.—p. 366.
Treatment of Furunculosis. J. V. Duhig.—p. 367.
Epidemic of Diarrhea Caused by New Strain of Salmonella Group. A. A. Ferris and R. Hertzberg.—p. 368.

Patent Ductus Arteriosus.—Of 14 patients operated on for patent ductus arteriosus 4 succumbed to operation, 2 from hemorrhage and 2 from other causes. One died from subsequent infective endocarditis. The patients successfully operated on have been followed up for periods varying from two to twenty-one months, and the results are uniformly good. As indications for surgical treatment Shallard lists (1) subacute bacterial endarteritis or endocarditis, (2) cardiac insufficiency and cardiac hypertrophy, (3) mental and physical retardation.

Archives Françaises de Pédiatrie, Paris

2:177-220 (No. 5) 1944-1945

*Case of Familial Adenomatous, Disseminated Polyposis of Large Intestine. Treatment by Total Colectomy. Leveuf, Laurence and Roueche. —p. 177.
Endocarditis Associated with Rheumatism in Young Children. R. Poinso and J. M. Laugier.—p. 187.
Hepatic Glycogenosis Revealed in Course of Angiocholitis. J. Boucomont and P. Cazal.—p. 196.
Rickets in Suckling Infants During Winter of 1942-1943. R. Sacrez, Miss R. Chapelo and Miss H. Leroux.—p. 199.

Polyposis of Large Intestine.—Leveuf and his associates report a case of familial, adenomatous, disseminated polyposis of the large intestine. A youth aged 18 had diarrhea and bloody discharge since the age of 11. At 17 the diarrhea and bleeding became profuse. There was considerable loss of weight. The father of the patient died from cancer of the rectosigmoid at 36, an uncle died from cancer of the splenic flexure at 32, the grandfather died from cancer of the liver at 46 and a great uncle died from an intestinal tumor at 30. The existence of adenomatous polyposis was not demonstrated in any of these cases. The patient was treated with irrigations of magnesium chloride through a cecostomy and orally. His general condition improved, but the polyps did not disappear. Colectomy was performed in two stages. The distal portion of the sigmoid and the rectum were conserved, and coagulation of the polyps was continued. The patient gained weight rapidly and returned to work. Roentgen therapy of adenomatous polyposis is uncertain and dangerous. Surgical treatment is recommended for the removal of the involved portion of the bowel for the prevention of the development of cancer, of intestinal obstruction, of hemorrhage and of ulcerative colitis. Subtotal colectomy, following low ileosigmoidostomy, and conservation of the rectum and its sphincter constitute the method of choice.

Presse Médicale, Paris

53:593-604 (Nov. 3) 1945

Sympathetic Ophthalmia: Its Place in General Pathology. J. Beauvieux and E. Bessière.—p. 593.
*Consideration of Age of First Importance for Interpretation of Statistics of Antidiphtheritic Vaccination. R. Rendu.—p. 594.
Five Years of Phosphorus-Calcium Deficiency: New Proof of Urgency of Indispensable Prophylactic Measures (Incorporation of Calcium in Bread and of Vitamin in Fats). H. and M. Hinglais.—p. 595.
Bilateral Lumbar Sympathectomy by Extraperitoneal Median Route. J. Kunlin.—p. 597.

Age and Antidiphtheritic Vaccination.—Age is of primary importance in the interpretation of statistics concerning vaccination against diphtheria. The incidence of diphtheria is on an average four times higher among children of preschool age than among those attending school. Vaccination is practiced more often among school children than among those not attending school. The average age of children in Paris who have not been vaccinated is 5 years, whereas the average age of the vaccinated is 8 years in spite of the fact that antidiphtheritic vaccination is obligatory in France. Paris hospital statistics show that diphtheria is two to three times more often fatal in children during the first six years of life than in those between the ages of 6 to 14 years. Paris hospital statistics published in 1944 showed a 7.1 per cent fatality rate among the vaccinated and a 9 per cent rate among the nonvaccinated children, but the age of the nonvaccinated was considerably lower than that of the vaccinated. Rendu concludes that the incidence of diphtheria is much lower and the disease is less severe among the vaccinated children as compared with the nonvaccinated. This fact depends on the difference in age of the two groups rather than on the effect of vaccination. Valid conclusions cannot be drawn from statistics in which the vaccinated persons are compared to the nonvaccinated whose average age is not the same.

53:633-652 (Nov. 24) 1945

Radiographic Examination of Club Foot. P. Marique.—p. 633.
Experimental Estrus: Attempted Interpretation of Action of Substances with Estrogenic and Cancerigenic Effect. H. Bulliard and I. Grundland.—p. 634.
Pseudoneoplastic Deformations of Antrum in Ulcer of Small Curvature. R. A. Gutmann.—p. 636.
*Arterial Lesions of Silicotic Blocks. L. Croizier, L. Ode and L. Roche. —p. 638.
Lobstein's Disease, Hereditary Syphilis and Rickets. F. Masselot and Arrighi.—p. 639.

Arterial Lesions of Silicotic Blocks.—Necropsies on miners who die of silicosis frequently reveal the existence of "blocks," hard fibrous masses occupying all or part of a pulmonary lobe. Microscopic examination of these lesions has shown considerable alteration in the arterioles which irrigate these lobes. Under the microscope the blocks appear practically avascular, but the vascular changes can be demonstrated by postmortem arteriopneumography. Croizier and his associates explain that after the lungs have been removed the pulmonary artery is injected with diluted barium oxide and the specimen is examined by x-ray, so that the vascular involvement of the silicotic blocks is put in evidence in its entirety. There exists from the onset a perivascular fibrous casing which encloses equally lymphatics, veins and pulmonary bronchi. The arteries are the elements that resist the longest. The most serious vascular lesions are in the region of the silicotic blocks. There is obliteration by thrombosis, with thickening of the intima and changes caused by distention of the elastic elements. The lesions terminate in total disintegration in a mass of sclerotic tissue. The role of tuberculosis in this process is debatable. While there is evidence that it is of importance, it is not always present. The vascular lesions appear early, and it is probable that the arterial involvement, associated with venous, lymphatic and bronchial lesions, is an important factor in the rapid evolution of the pneumonoconioses of miners.

53:653-664 (Dec. 1) 1945

Chronic Agranulocytosis in Radiologist. C. Aubertin.—p. 653.
*Antidiphtheritic Staphyline, New Microbic Antagonist. R. Duliscouet. —p. 653.
Analysis of Diabetes Insipidus. R. Kourilsky.—p. 655.
New Ocular Test for Alimentary Deficiency. R. Weekers and F. Roussel. —p. 656.

Antidiphtheritic Staphyline.—Duliscouet reports experiments in vitro and in guinea pigs which demonstrate that the antagonistic or active strains of staphylococci produce a lysogenic substance which prevents the growth of the Loeffler bacillus. The antagonistic effect of this substance is identical with that of the strain by which it is produced. This effect is manifested on growth of the diphtheria bacillus; the action of the diphtheritic toxin is not influenced. Two stages are to be considered in the development of this antagonism: The first is the preparatory stage during which the active staphylococcus assimilates the culture medium and multiplies. This multiplication ends in the formation of a specific, active, bacteriolytic principle.

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Progrès Médical, Paris

73:401-432 (Dec. 10) 1945

Present Knowledge of Physiologic Action of Procaine Hydrochloride. P. Hazard.—p. 403.
Intravenous Procaine Hydrochloride. M. P. Ameuille.—p. 407.
*New Therapeutic Application: Intravenous Procaine Hydrochloride; Surgical Aspect of This Drug. A. Berthelemy.—p. 413.
Cryptoleukemia with Clinical Course of Pseudocirrhosis: Brutal Onset with Symptoms Simulating Appendicitis. B. Muller.—p. 415.

Intravenous Procaine Hydrochloride in Surgery.—Berthelemy reports the results of intravenous injections of procaine hydrochloride in 80 cases of frostbite of the foot in the French army during the winter campaign of 1944. Seventy-five of the cases were mild, while the remaining 5 were considered grave. In the 5 grave and in 15 mild cases the injection was made into the femoral artery. The remaining 60 soldiers were given an intravenous injection of 20 cc. of a 1 per cent solution. Patients who suffered extremely were given another injection the same night and almost all of them slept. Sixty patients were able to walk the second day after admission, and three days later 70 patients returned to the front line. Only 5 patients in addition to the 5 with grave frostbite were evacuated to a base hospital. Both intra-arterial and intravenous injections appeared effective, but the effect of the intravenous injections seemed to be more satisfactory. An intravenous injection proved effective after the failure of an intra-arterial injection. Intravenous procaine hydrochloride was used also in the treatment of hundreds of indolent wounds with torpid cicatrization. Complete cicatrization occurred within twenty days to one month of the start of the treatment. Intravenous injections proved superior to the intracutaneous or subcutaneous infiltration of the area adjacent to the wound. Three daily intravenous injections were made in many cases of tibiotarsal sprain, and the results were as satisfactory as those with local infiltration and there was less pain. Good results were obtained in several cases of dislocation of the shoulder, the elbow and the fingers after reduction was accomplished. Function was restored rapidly. In fractures with slight displacement, e. g. fractures of the tuberosity of the humerus and in fractures of the wrist, the injections were continued daily for ten days. Painless mobilization became possible within twenty-four hours of the first intravenous injection. Union occurred rapidly and without complications. The results from this treatment in arthritis, hydrarthrosis and for pain of gastric ulcer were encouraging.

Praxis, Bern

34:647-666 (Nov. 15) 1945

*Use of Cellophane for Prostheses of Tympanic Membrane. E. P. Steinmann.—p. 647.
Sterility by Functional Alteration of Ovary. P. Dubuis.—p. 653.

Cellophane Prostheses of Tympanic Membrane.—Steinmann has applied cellophane prostheses to about forty tympanic membranes. The artificial tympanic membranes adhere for several weeks, usually without irritation in the middle ear. In only 1 case did a mucopurulent secretion develop, which caused flushing out of the prosthesis. The normal desquamation of the tympanic membrane usually causes the prosthesis to slide backward after a few weeks. In the case of new and particularly traumatic perforations, this period is sufficient to permit their closure. In older perforations, granulations likewise appear at the edge of the defect, but this zone of new growth is highly sensitive and complete closure is usually accomplished only after repeated attachments of artificial tympanic membranes. The improvement in the hearing capacity effected by the cellophane prosthesis is considerable.

Policlinico (Med. Sect.) Rome

52:137-175 (Sept.-Oct.) 1945. **Partial Index**

*Rare Constitutional Abnormality of Blood in Relation to Hereditary Microcytic Anemia. E. Silvestroni and I. Bianco.—p. 137.

Constitutional Microcytic Anemia.—Silvestroni and Bianco examined the blood of 1,000 normal persons living in different zones of Italy. An abnormality consisting of an increased number of the erythrocytes, diminished hemoglobin, microcytosis and increased resistance was found in 88 persons. Morphologic changes in the erythrocytes and hyperhemolysis were sometimes present. The leukocytes and platelets were normal. The skin was pale or subicteric. There was moderate splenomegaly. The abnormality is transmitted according to mendelian law. It is more frequent in Sicily and Sardinia than in other parts of Italy. The authors believe that this form of constitutional microcytic anemia is different from the classic form of hemolytic jaundice since anemia and microcytosis are the predominant features and heredity is an indispensable factor for its development.

Nordisk Medicin, Gothenburg

11:2667-2736 (Sept. 20) 1941

Hospitalstidende

So-Called Primary Sinus Thrombosis, with Report of 2 Cases. J. F. Christensen.—p. 2669.
Results of Transplantation of Ovary to Omentum: After-Examination. K. Østerbye.—p. 2675.
*Examinations of Sternal Marrow in Nephrogenic Anemias. Chresten Faarup and A. Søeborg Ohlsen.—p. 2680.
Blood Regeneration in Pernicious Anemia. Calculation of Standard. Significance of Age. E. Schiødt.—p. 2687.

Medicinsk Revue

Adrenogenital Syndrome and Cushing Syndrome. S. Quist-Hanssen.—p. 2689.
Diaphragmatic Hernia. K. Johanning.—p. 2695.

Hygiea

Case of Incarcerated Diaphragmatic Hernia. S. Neij.—p. 2703.

Examinations of Sternal Marrow in Nephrogenic Anemias.—Faarup and Ohlsen tabulate results of 21 sternal punctures in 19 cases, 12 of chronic glomerulonephritis or nephrosclerosis, 1 of subacute glomerulonephritis, 5 of pyelonephritis and 1 of interstitial nephritis. They conclude that in cases of anemia with renal insufficiency due to chronic glomerulonephritis or nephrosclerosis the anemia depends on a hypoplastic, or in some instances on an aplastic erythropoiesis, which explains the failure of the usual antianemic remedies. In these cases it is essential to counteract the azotemic condition first.

25:449-504 (March 16) 1945. **Partial Index**

*Early Diagnosis in Pulmonary Cancer. H. H. Wandall.—p. 454.

Hospitalstidende

Chronic Pyelonephritis Without Proteinuria. F. Raschous.—p. 457.
Paralytic Myoglobinuria. J. Schwerin.—p. 460.

Hygiea

Cases of Waterhouse-Friderichsen Syndrome in Adults. A. Bergstrand.—p. 461.
Preliminary Studies on Blood Group Factor P. B. Jonsson and V. Fabricius-Hansen.—p. 467.

Svenska Läkaresällskapets Förhandlingar

Advances in War Surgery During Present War. Einar Perman.—p. 472.

Early Diagnosis of Pulmonary Cancer.—Wandall says that histologic verification of the diagnosis of pulmonary cancer by bronchoscopic biopsy can be anticipated in about half of the cases. Puncture of the lung by aspiration biopsy, thoracoscopic biopsy, establishment of tumor cells in the pleural exudate and demonstration of tumor cells in the expectorate are available methods. The last named procedure allows definite establishment of tumor elements in about four fifths of the cases of primary pulmonary cancer. The specimen must be from the bronchi and not be allowed to stand more than eight hours. By application of bronchoscopic biopsy and examination of the expectorate the diagnosis of cancer of the lungs can be verified in about 90 per cent of the cases. Sometimes exploratory thoracotomy will be necessary. All patients over 35-40 should be thoroughly examined if cough, expectoration or lowered general condition continues after pneumonia, influenza or severe febrile colds, if these disorders recur or if there are hemoptysis, attacks of atypical pain in the upper part of the abdomen, thorax, shoulder and arm. The fact that pulmonary cancer can be cured if treatment is given in time and that young persons are often affected calls for bending every effort for thorough examination of these patients as soon as symptoms appear.

Book Notices

A Future for Preventive Medicine. By Edward J. Stieglitz, M.S., M.D., F.A.C.P. Studies of The New York Academy of Medicine Committee on Medicine and the Changing Order. Cloth. Price, $1. Pp. 77, with 7 illustrations. New York: Commonwealth Fund; London: Oxford University Press, 1945.

Seldom does one find the wealth of wisdom, philosophy and factual information within the pages of a single volume. This monograph will challenge the imagination and hold the concentrated attention of the reader from beginning to end. That the problems of the future will not lend themselves with increasing benefits to systems for the mass treatment and control of disease is the strong conviction of the author. The individual cannot be "given" health. He must recognize its value and consciously strive to achieve a high standard through education and knowledge derived from research. Government may make the facilities available, but that in itself is not enough —the interest and will of the individual are highly essential to the success of a health program. Health in its fullest sense is not a right that can be demanded. It must be sought for and deserved through conscious intelligent individual effort. Dr. Stieglitz pulls no punches nor does he mince words. He leaves no doubt as to his attitude toward some of the health and medical problems of the present day. Among others the significance and value of the health inventory is set forth with a clarity and emphasis that is new and refreshing. Not every one will agree with everything that Dr. Stieglitz says, but the provocative statements will cause serious thought and result in wholesome discussion.

The Physician's Business: Practical and Economic Aspects of Medicine. By George D. Wolf, M.D., Assistant Clinical Professor of Otolaryngology, New York Medical College, New York. With a foreword by Harold Rypins A.B., M.D., F.A.C.P. Second edition. Fabrikold. Price, $6. Pp. 433, with 58 illustrations. Philadelphia, London & Montreal: J. B. Lippincott Company, 1945.

This is a revision of the original volume, which first appeared in 1938. Added are chapters on prepayment health (or sickness) insurance and workmen's compensation laws. Both are well done. However, the former is already somewhat out of date because of the rapid changes taking place and recent actions of organized medicine. As the author points out, the chapter on medical careers other than private practice is somewhat obsolete, having been written before the war. This is equally true of portions of the chapters on specialization and on location. It might have been well, therefore, to withhold publication of the second edition until conditions had become more settled. Especially informative and helpful are the chapters dealing with case histories, planning and equipping an office, office personnel, technics and surgical instruments. It is quite evident that the author is much better equipped to write on these subjects than on business procedures. The chapter dealing with financial records is incomplete and could also stand revision. That portion of the chapter on the doctor and his patient relating to financial records might well be combined with that on the income tax. The desirability of some of the procedures outlined in collecting doctors' accounts might also be open to question. On the whole, however, the author has done a thorough job. The title of the book does not by any means indicate its scope. Better is its subtitle, "Practical and Economic Aspects of Medicine."

Recent Advances in Obstetrics and Gynecology. By Aleck W. Bourne, M.A., M.B., B.Ch., Obstetric Surgeon to St. Mary's Hospital, London, and Leslie H. Williams, M.D., M.S., F.R.C.S., Obstetric Surgeon to Out-Patients, St Mary's Hospital, London. Sixth edition. Fabrikold. Price, $5.50. Pp. 357, with 77 illustrations. Philadelphia: Blakiston Company, 1945.

This is the sixth edition to appear since 1926. As in previous editions, the authors have selected special subjects in which there have been definite advances in our knowledge. In this edition the topics selected are (1) nutrition in pregnancy and fetal development, (2) vitamin K and hemorrhagic disease of the newborn, (3) anesthesia and analgesia in obstetrics, (4) breech deliveries, (5) erythroblastosis, (6) postnatal care, (7) stillbirth and neonatal death, (8) radiology in obstetrics (by E. Rohan Williams), (9) cancer of the uterus, (10) sterility, (11) leukorrhea, (12) sympathectomy, (13) the sex hormones, (14) ovarian tumors (by Wilfred Shaw), (15) radiologic investigation and diagnosis in gynecology (by E. Rohan Williams) and (16) x-ray therapy in gynecology (by W. M. Levitt). For each subject the authors have carefully read and interpreted the literature. In addition they offer their personal criticism and suggestions. At the end of each chapter is a list of references. It is unfortunate that the authors devoted three of the sixteen chapters, or almost one fifth of the entire book (sixty-two pages) to radiology. They might have devoted some of this space to obstetric uterine hemorrhages, puerperal sepsis and its modern treatment, gynecologic operative technic and pelvic infections, particularly the newer therapy of gonorrhea. In spite of this shortcoming the book should prove useful to practitioners who cannot keep pace with the progress which is made in obstetrics and gynecology by reading original papers. The book is well written and is adequately illustrated. In spite of the critical paper situation and the shortage of skilled printers in England, the publishers have done their part most creditably.

Carbon Monoxide: Its Hazards and the Mechanism of Its Action. By W. F. von Oettingen, Principal Industrial Toxicologist, United States Public Health Service. Federal Security Agency, United States Public Health Service, Public Health Bulletin No. 290. From the Industrial Hygiene Research Laboratory, National Institute of Health. Prepared by direction of the Surgeon General. Paper. Price, 35 cents. Pp. 237, with 26 illustrations. Washington, D. C.: Supt. of Doc., Government Printing Office, 1944.

Deaths from carbon monoxide still continue to occur far beyond any reasonable warrant. Some of these deaths are suicidal; others are the results of defects in the mechanism of exhausts in engines of many kinds, particularly exhausts of motor cars. This monograph by a distinguished toxicologist of the U. S. Public Health Service is the most complete work on the subject yet made available, covering completely the sources of exposure to carbon monoxide, its chemistry, methods of determination of its presence, the pathology, the clinical symptoms, the prophylaxis and the treatment. The monograph is supplemented with a bibliography and an author and subject index.

Manual for Coding Causes of Illness According to a Diagnosis Code for Tabulating Morbidity Statistics. Prepared by Direction of the Surgeon General in the Division of Public Health Methods, U. S. Public Health Service, with the Cooperation and Assistance of the Division of Vital Statistics, U. S. Bureau of the Census, the Johns Hopkins Hospital and School of Hygiene and Public Health, and the Mayo Clinic. Federal Security Agency, U. S. Public Health Service, Miscellaneous Publication No. 32. Cloth. Price, $1.25. Pp. 489. Washington, D. C.: Government Printing Office, 1944.

This manual has been devised to facilitate the statistical tabulation and analysis of the causes for morbidity. It does not conflict with any nomenclature of disease and should not be used to classify causes of disease except for statistical purposes. If properly used and modified by experience this manual should serve to promote statistical handling of causes of illness and to bridge the gap between detailed clinical diagnoses and the causes of death as given in the officially adopted International List.

Statistical Methods Applied to Experiments in Agriculture and Biology. By George W. Snedecor, Director of Statistical Laboratory of Iowa State College, Ames, Iowa. Fourth edition. Cloth. Price, $4.50. Pp. 485, with illustrations. Ames, Iowa: Collegiate Press, Inc., 1946.

Previous editions of this book on statistical methods have been reviewed in THE JOURNAL. The latest edition, coming six years after the third, contains a great deal of valuable information for those who are interested in statistical methodology. The text has been largely rewritten. It is not simple reading for any one who is not thoroughly familiar with mathematics and the science of statistics.

Diary of the Ship's Surgeon: Being the Diary of a Ship's Surgeon on a Voyage to the Orient Just Before Pearl Harbor. By R. G. Ehlers, M.D. Cloth. Price, $1.50. Pp. 182, with 1 portrait. Boston: Meador Publishing Company, 1944.

This little book is the diary of a surgeon serving on a Merchant Marine ship just before the entry of this country into the war. It has little medical significance but furnishes pleasant reading, although throwing a depressing light on certain aspects of our prewar Merchant Marine Service and its personnel.

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Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

SODIUM BALANCE IN EDEMA

***To the Editor:*—Could you explain to me the mechanism of "tissue retention of sodium" in an edematous patient? In view of the fact that the sodium ion can freely permeate the capillary endothelium, how can the tissues retain enough sodium to promote edema? In other words, why doesn't the sodium enter the capillary instead of the fluid leaving the capillary?**

Frank De Trana, M.D., Chicago.

ANSWER.—The capillary wall is freely permeable to sodium in either direction, and edema is not due to a change in this permeability. Therefore the phrase "tissue retention of sodium" must not be taken too literally. It really means an excess of the normal extravascular or interstitial fluid, which is essentially a low protein ultrafiltrate of the plasma containing all the diffusible electrolytes and nonelectrolytes in approximately the same concentration as the plasma, except for the small differences due to the Donnan membrane equilibrium. The chief electrolyte cation in extracellular fluids is sodium; the chief anions are chloride and bicarbonate.

Edema is brought about by a disturbance in the balance of forces favoring filtration and reabsorption respectively. When sodium, as sodium chloride, is ingested it is absorbed as an isotonic solution, increases the plasma volume and is filtered by the capillary blood pressure into the interstitial spaces. If the sum of factors in the reabsorption of tissue fluids (plasma protein osmotic pressure, tissue pressure and lymphatic drainage) is less potent than the sum of factors in filtration (capillary blood pressure, amount of protein in interstitial fluid, local tissue metabolism), an excess of saline solution will remain in the tissue spaces. If, on the other hand, sodium is restricted in the diet or its normal absorption from the lumen of the renal tubule is diminished by the action of diuretic drugs, urinary loss of sodium (and chloride and water) soon reverses the stream and more interstitial fluid moves back into vascular channels until a new equilibrium is established. If sodium chloride could be given in large amounts with little water so as to render the body fluids high in salt concentration, diuresis would undoubtedly result even in an edematous patient. In other words, the tissues in edema do not retain sodium but simply contain an excess of interstitial fluid with their normal sodium concentration. Some tissues, like bone and certain types of collagen, contain sodium in "bound" form, not freely exchanging with the sodium of interstitial fluid although participating in the uptake of radioactive sodium.

The exchange of muscle cell potassium for sodium which is seen after severe trauma, burns, severe dehydration with loss of muscle cell water and its contained potassium or after excessive administration of desoxycorticosterone in animals (and probably in man) is not a true tissue retention of sodium and is not to be identified with edema in the ordinary sense, since the water content of the affected muscle cell is not increased. On the other hand, the decreased execretion of sodium which is the result of desoxycorticosterone effect on the renal tubular reabsorption reflects itself in an increased plasma volume, increased blood pressure and ultimately increased filtration of plasma water and its contained electrolytes into interstitial spaces, producing edema.

On the whole, therefore, the concept of the permeability of the capillary wall is best omitted in the consideration of ordinary cardiac or renal edema, since changes in permeability to electrolytes and water do not play a significant role in this type of edema.

CARBON 13

***To the Editor:*—I have recently received a letter from France stating that "the newspapers of France have published articles on Carbon 13 which should be a sensational American discovery in the fight against cancer." Can you give any information concerning this subject?**

Campbell Howard, M.D., New York.

ANSWER.—Carbon 13 is an isotope of "normal" carbon 12, from which it differs by having an extra neutron in its nucleus. It is stable and not radioactive. It has not been found useful in the treatment of any disease. However, it has been useful in studies of metabolism. Carbon 13 has chemical properties identical with carbon 12 but weighs more. Hence compounds may be marked or "labeled" by the presence of carbon 13. This permits the tracing of the intermediate stages of metabolism which compounds undergo after ingestion. A wide field of investigation is thus opened by the use of carbon 13 for the solution of many metabolic problems. The study of intracellular metabolism is extremely important in cancer research. Although at the present time physical instruments for measuring isotopes are not sensitive enough to enter individual cells, carbon 13 can be used for studies of tissue metabolism.

The quantity of carbon 13 was minimal until the recent erection of a thermal diffusion plant by the Houdry Process Corporation, Marcus Hook, Pa. The Sun Oil Company has recently begun construction of a large plant for the same purpose.

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Weinhouse, Sidney; Medes, Grace, and Floyd, N. F.: Fatty Acid Metabolism: The Mechanism of Ketone Body Synthesis from Fatty Acids, with Isotopic Carbon as Tracer, *J. Biol. & Chem.* **155:** 143 (Sept.) 1944.

Medes, Grace; Weinhouse, Sidney, and Floyd, N. F.: Ketone Body Formation from Acetate in Kidney, with Isotopic Carbon as a Tracer, *ibid.* **157:** 751 (Feb.) 1945.

Medes, Grace; Weinhouse, Sidney, and Floyd, N. F.: The Mechanism of Fatty Acid Oxidation, *ibid.* **153:** 689 (May) 1944.

SENSITIVITY TO SULFADIAZINE OR FISH POISONING

***To the Editor:*—A man aged 60 with calculosis of the left kidney accompanied by a mild form of pyelitis became ill with fever, conjunctivitis and stomatitis in the form of many patches on the tongue, palate and cheeks two hours after taking one single tablet (0.5 Gm.) of sulfadiazine while eating a dish of fish in a restaurant. It does not seem justified to accuse such a small dose of sulfadiazine unless there exists something like a hypersensitivity. Some months ago the man had been using the same drug in moderate doses. I should like to know if such a sequence of events has been observed elsewhere. Otherwise in this case the meal of fish ought to be accused.**

F. Hinrichsen, M.D., Rio de Janeiro.

ANSWER.—Fever, conjunctivitis and stomatitis are manifestations of sensitivity to sulfadiazine. A person may take sulfadiazine or any other sulfonamide without any untoward reaction; then, after an interval of some time, evidence of sensitivity to a sulfonamide may appear following an initial dose of a small amount of a given sulfonamide. However, in the case under discussion one cannot rule out the possibility of fish causing sensitization. It is assumed that the patient has eaten fish in the past without displaying evidence of sensitivity. If this is true, then sensitization to sulfadiazine should be seriously considered. Tests for eliciting sulfonamide sensitivity are unsatisfactory. If there is any doubt about a patient being sensitive to the drug he should be given a single tablet and then observed for six to eight hours. Usually within this time he will display signs of sensitivity such as nausea, vomiting, fever, chilly sensations and at times a dermatitis.

SERUM PHOSPHORUS IN HYPERPARATHYROIDISM

***To the Editor:*—Is there any explanation why the serum phosphorus is low in hyperparathyroidism? Why do so many diet experts recommend the use of beef in diet lists and do not allow veal though veal is more tender?**

Anthony Pirrone, M.D., Cleveland.

ANSWER.—The changes in calcium and phosphorus metabolism characteristic of hyperparathyroidism are increased serum calcium, increased calcium and phosphorus excretion and decreased serum phosphorus.

Jaffe suggested that the parathyroid hormone in some way mobilizes the insoluble calcium salts of the bone and thereby raises the serum calcium level. Since calcium and phosphate ions form a slightly soluble salt, the increased serum calcium would drive the phosphate ions from the serum into the bone and thereby lower the concentration of the phosphorus in the serum. This hypothesis is supported by the work of several recent investigators quoted by Pope and Aub, who found indications that the parathyroid hormone acts primarily to mobilize calcium from the bone.

On the other hand, Albright and Ellsworth suggested that the primary action of the parathyroid hormone is to increase renal excretion of phosphorus. This is supported by the Harrisons, who showed that parathyroid hormone decreases renal tubular reabsorption of the phosphate ion. This results in a low serum phosphorus, which allows withdrawal of calcium from the bone to raise the serum calcium level. The increased serum calcium level then leads to increased urinary excretion of calcium.

These two hypotheses may eventually be reconciled. It is probable that both mobilization of calcium from the bone and increased renal excretion of phosphate ion are effected by the direct action of parathyroid hormone.

The omission of veal from diet lists must be presumed to be without significance, since there is no essential difference in the relative nutritive value of beef and veal. A comparison of their relative composition, such as that given in a recent publication of the Department of Agriculture, shows that they are practically identical, the only difference being a slightly greater concentration of niacin and riboflavin in veal than in beef.

References:

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Pope, Alfred, and Auh, J. C.: The Parathyroid Glands and Parathormone, *New England J. Med.* **230**: 698 (June 8) 1944.

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U. S. Department of Agriculture: Tables of Food Composition, Washington, D. C., U. S. Government Printing Office, 1945, No. 572.

EMPYEMA AND PENICILLIN THERAPY

To the Editor:—**Is it possible that, following treatment of a bacterial empyema with penicillin administered intrapleurally, the micro-organisms are completely eliminated and the inflammation persists for a considerable length of time? In other words, is persistence of exudate, even when bacteriologically sterile, evidence of bacterial infection not elucidated?**

M.D., New York.

ANSWER.—Bacteria may disappear rapidly or dead bacteria may be demonstrable in the pus after penicillin is injected into the pleural cavity during empyema, but some time is required for the resorption of pus. Therefore the persistence of exudate does not necessarily indicate continued bacterial infection or inflammation. However, sterile pus acting as foreign protein material may cause a degree of inflammation. The matter was discussed by Poppe in THE JOURNAL, Oct. 6, 1945, page 435. He recommends a week's observation after discontinuing penicillin to determine whether residual infection still remains. Relapses occurred in half of his patients. Surgical drainage is necessary when turbid pleural effusion persists after a pyogenic infection has been adequately treated with penicillin.

EFFECT OF ACETYLSALICYLIC ACID ON LEUKOCYTE COUNTS

To the Editor:—**Does aspirin have any effect on the white blood cell count and, if so, what effect? Further, if aspirin does affect the white blood cell count, would 10 or 15 grains of aspirin daily have such effect?**

J. D. Riley, M.D., Booneville, Ark.

ANSWER.—There is no evidence that aspirin (acetylsalicylic acid) has any effect on the white blood cell count. Since aspirin is a benzene ring preparation, it might justifiably be included in the list of drugs that are known to produce reduction of white cells, but it is probable that the side chains on the benzene ring make it nontoxic. There have been rare reports in which aspirin is believed to have caused thrombocytopenia or hypothrombinemia resulting in a hemorrhagic syndrome. These are probably instances of idiosyncrasy to the drug.

SOLUTIONS TO USE IN THE NOSE

To the Editor:—**I have been using mild protein silver packs in the nasal cavity to promote profuse discharge. Some patients object to this, stating that it causes irritation. Can you supply me with one or more prescriptions that I may use for this purpose?**

M.D., Washington.

ANSWER.—Before answering the question it may well be asked to what purpose one would wish to use a preparation for the sole purpose of promoting a profuse discharge. The latter may mean no more than a response to undue irritation.

Investigations in the past few years have been devoted to the idea of using preparations in the nose compatible with the proper physiologic functioning of the nasal mucosa.

Such solutions as recommended by N. D. Fabricant (Nasal Medication, Baltimore, Williams and Wilkins, 1942) and others, whether used in packs, sprays or as drops, should have a moderate decongestant effect and may contain biotics such as microform sulfathiazole crystals, tyrothricin or penicillin but should not vary greatly in their p_H (5.5 to 6.5) from that of normal nasal secretions, nor should they be harmful to ciliary action. They should not injure the nasal mucosa and should be isotonic with the blood. They should not cause undue secondary side reactions, such as increased nasal congestion, watery secretion or sneezing. Preparations too that cause the blood pressure to rise unduly should be avoided. A number of good preparations are on the market and contain either the salts of ephedrine or those of closely allied synthetically prepared substances.

CHEYNE-STOKES RESPIRATION

To the Editor:—**I have Cheyne-Stokes respiration, beginning about eight months ago. I have mild bronchiectasis, perhaps better termed chronic bronchitis. My age is 70; my blood pressure is 70/120; my heart had always been good until this began, doubtless from overwork with the ever present flu, which has been disturbing heart and musculature. I have been using aminophyline. How about histamine—what is the suggested dosage? I am better lying down with two pillows, though I drive my car and walk about without any thought of weakness unless too long continued.**

M.D., California.

ANSWER.—Cheyne-Stokes respiration, a waxing and waning type of breathing in which the respiration is at first slow and shallow, then gradually builds up to a maximum in depth and rate only to subside again and finally cease for a short time, is occasionally found in normal adults during sleep. The most common clinical conditions in which it is found are advanced renal and heart disease, asthma and increased intracranial pressure. The pressure of orthopnea in this case (as judged by the need of two pillows when lying down) suggests the pressure of cardiac insufficiency.

Since therapy is decided by the chief cause of the Cheyne-Stokes respiration, a careful evaluation of the cardiac and renal status is indicated. Treatment directed toward an abnormality of the cardiorenal systems probably will have a secondary beneficial effect on the respiration. Histamine has a definite tendency to produce a fall in blood pressure and thus is not indicated for treatment of Cheyne-Stokes respiration. Occasional rebreathing, or the use of a 7 per cent mixture of carbon dioxide in oxygen, may help to stabilize the respiratory rhythm.

INSOMNIA AND HYPERHIDROSIS IN CIRCULATORY DISORDERS

To the Editor:—**A man, aged 67 has had a hypertension for the last twelve years or more but, until December 1944, never had any confining sickness. At that time, though, he suffered an attack of angina and was in the hospital for a week. About a month later he had an attack of complete suppression of urine, relieved only by catheterization. On Feb. 1, 1945 a transurethral prostatectomy was performed with uneventful recovery. His work consists entirely of office work, not requiring any physical effort more than driving an automobile to the office and back. On Oct. 5, 1945 the patient had what was obviously an attack of angina with coronary occlusion, accompanied by shortness of breath, and has been confined to bed since that time for complete rest. Each morning at about 6 o'clock he wakes up and becomes drenched in a cold, clammy perspiration. The appetite is poor. The only medication taken is digitoxin, and because of insomnia he takes from 0.1 to 0.2 Gm. pentobarbital sodium. Could you suggest something to stop this hyperhidrosis as it is the most disagreeable part of the illness.**

M.D., West Virginia.

ANSWER.—The early morning perspiration described suggests a reaction to some circulatory disorder. One of the causes of insomnia and of early awakening is pulmonary congestion and that, when moderately acute, can give rise to perspiration. It would be wise, therefore, to look for pulmonary congestion and to treat it if found by diuretic therapy and perhaps low salt intake as well as by digitalis. The poor appetite may be due either to congestion or to the effect of digitalis. There is no information on the production of perspiration by pentobarbital sodium or by digitalis. Now and then insomnia may be relieved in persons who have left ventricular strain and failure, not by hypnotics, but by diuretics.

OPERATIONS ON CLITORIS FOR FRIGIDITY

To the Editor:—**While I agree with the reply to Dr. Frank E. Hyde's question about operations on the clitoris for frigidity or reduced libido as far as the effect of such operations is concerned (with the exception that the glans clitoris should be exposed if it is entirely covered by a prepuce), I take definite exception to the statement from Greenhill. This no doubt comes from "Frigidity in Women," by Hitschmann and Bergler (Washington and New York, Nervous and Mental Disease Publishing Company, 1936). Thousands of women who are normal in every way sexually and have one or more orgasms spontaneously in each act of intercourse will testify that the clitoris is the principal erogenous zone. Havelock Ellis made clear the relative insensibility of the vagina. In my opinion there is no such thing as a "vaginal orgasm," for there are no genital corpuscles in that organ. In both sexes they are found only in the head of the phallic organ. Only through these specialized nerve endings (cerebrally or locally stimulated) can the orgasm be initiated and felt.**

G. Lombard Kelly, M.D., Augusta, Ga.